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On reanalysis and actualization in syntactic change

The rise and development of English verbal gerunds*

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This paper examines the process whereby the English gerund, originally an abstract deverbal noun of action, was reinterpreted as part of the verb system and acquired verbal properties, such as the ability to govern a direct object (e.g., *by writing a letter*). The analysis of the data reveals that by Early Middle English some gerundial patterns had become structurally ambiguous and thus served as the basis for the reanalysis of a nominal category as a verbal one. The actualization (Timberlake 1977) of the innovated underlying structure at the observable level of language use is also discussed, as are the implications of the changes undergone by the gerund for current views of grammaticalization as the main mechanism of syntactic change.

Keywords: Actualization, categorial change, syntactic change, gerunds, gradience, grammaticalization, intraference, reanalysis

1. Introduction

The terms *reanalysis* and *actualization* have been current in historical syntax since the mid 1970s — thanks, in large measure, to the publication of studies

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such as Langacker's "Syntactic reanalysis" (1977) or Timberlake's "Reanalysis and actualization in syntactic change" (1977). Timberlake established a sharp distinction between two types of change in syntax: *reanalysis*, "the formulation of a novel set of underlying relationships and rules", and *actualization*, "the gradual mapping out of the consequences of the reanalysis" (1977:141). The importance of this distinction, which has been widely recognized since then (see, among others, Harris & Campbell 1995:77ff., Andersen 2001a, 2001b, Harris 2003:536ff.), will be examined in this paper with regard to one major syntactic change which took place in the history of English, namely the acquisition of verbal features by the abstract deverbal noun in *-ing*, or *gerund*. This development, which has a historical analogue in the evolution of the Indo-European infinitive from a noun of action into a part of the verb system (Disterheft 1980), is illustrated below; in (1)–(2), the gerunds *doying* and *chastisyng* govern nominal dependents such as *of*-phrases, unlike *casting* and *biholdinge* in (3)–(4), which take NP objects.

- (1) ?a1300 *Kyng Alisaunder* 558 [Tajima 1985:62]:
 Wiþouten doying *of any harme*
 "without doing any harm"
- (2) a1387 Trevisa *Higden's Polychronicon* 5.153 [*MED* s.v. *dreden* v.2.(a)]:
 He hadde i-trespased, and dredde the chastisyng *of his maister*
 "He ... dreaded being punished by his master"
- (3) c1300 (MS a1400) *English Metrical Homilies* 112/2–4 [Tajima 1985:76]:
 Sain Jon was ... bisi In ordaining of priestes, and clerkes, And in casting
kirc werkes
 "Saint John was ... busy ordaining priests and clerics, and in planning
 church works"
- (4) a1460 *Dicts and Sayings of the Philosophers* 276/31 [Tajima 1985:80]:
 in the biholdinge *the feire fethers of his taile*

The process of verbalization exemplified by the last two examples, and the various hypotheses which have been put forward to account for it, will be reviewed in §2 below. In §3 I will look at various formulations of reanalysis, in particular those of Langacker (1977), Harris & Campbell (1995), and Croft (2000), and will then go on to argue that the rise of verbal gerunds in Middle

English¹ was motivated, ultimately, by the syntactic ambiguity of some gerundial constructions involving constituents which could occur readily in both NP and VP structure, such as locative and temporal adverbs and particles, among others. The implementation and actualization of the reanalysis from Middle English times into Present-day English will be the concern of §4. §5 will examine the implications of the developments undergone by the gerund for current models of morphosyntactic change such as grammaticalization theory. Lastly, a summary of the main conclusions will be offered in §6.

2. The English gerund: Origins and development

2.1 The acquisition of verbal features

The Old English ancestor of the gerund was an abstract noun of action formed by the addition of the suffixes *-ung* or *-ing* to a verb stem, as in *sceawung* “observation” (< *sceawian* “observe”) and *wending* “turning” (< *wendan* “turn”); see Kisbye (1971:51ff.) and Kastovsky (1985:241–243) for details. These nouns behaved like any other noun in all relevant respects, and could therefore take nominal dependents such as determiners, adjectives, or genitive phrases; see in this connection the sequence *and in leornunge haligra gewrita* “and in studying the holy Scriptures” (Alfred: *Bede*; quoted in Kisbye 1971:53), where the genitive phrase *haligra gewrita* represents the notional object of the action noun *leornunge*. From Early Middle English, these genitive phrases were replaced by a periphrastic genitive with *of*, as in (1) above (Mustanoja 1960:74–76, Tajima 1985:60ff.).

In Early Middle English, *-ung* rapidly died out and *-ing* became the regular form (*OED* s.v. *-ing*¹, Kisbye 1971:54, Dalton-Puffer 1996:90–91). Also in the course of Middle English, *-ing* nominals began to acquire verbal properties, a development that has ultimately led to the Present-day English situation, where gerunds have the ability to:

1. Though there is no complete agreement among scholars as to when exactly one period in the history of English ends and another begins, I will here adopt the more or less traditional divisions of Old English (OE, up to about 1100), Middle English (ME, 1100–1500), Early Modern English (EModE, 1500–1700), Late Modern English (LModE, 1700–1900), and Present-day English (PDE), with a further subdivision of Middle English into Early Middle English (EME, 1100–1300) and Late Middle English (LME, 1300–1500).

- a. govern an object or a predicative complement (e.g., “their following *the child* into England”, “I don’t like being *ill*”);
- b. be modified by adverbs or adverbials restricted to cooccurring only with verbs (e.g., “my *quietly* leaving before anyone noticed”);
- c. show tense and voice distinctions (e.g., “of *having done* it”, “the necessity of *being loved*”);
- d. be negated by means of the VP-negating particle *not* (e.g., “my *not* leaving”); and
- e. take a subject in a case other than the genitive (e.g., “prevent *the treaty* taking effect”).

In this way, English, unlike all other European languages, has evolved a third type of sentential complement, alongside finite clauses and *to*-infinitives.

This important syntactic shift has been discussed extensively. In general, earlier researchers (Blume 1880, Curme 1912, 1931, Einkenkel 1913, 1914, Poutsma 1923, van der Gaaf 1928, Callaway 1929, Mossé 1938:§165, Dal 1952, Mustanoja 1960:567ff.) focused primarily on the possible sources from which the verbal gerund may have arisen, while with the exception of Jack (1988) and Houston (1989), more recent work (Tajima 1985, 1996, Donner 1986, Koma 1987, Tabor & Traugott 1998, Fanego 1996a, 1996b, 1996c, 1998, forthcoming, Miller 2002)² has tended to pay attention to the process of verbalization itself. In connection with this, a particularly valuable study is Tajima’s comprehensive monograph (1985), where he examines a large sample of ME writings covering the span 1100–1500. This enables him to suggest that the verbalization of the gerund proceeded as follows. Around 1200, the deverbal noun in *-ing* began taking adverbial modifiers of various kinds (5–11). The first instances with direct objects (12–13) appeared around 1300, and from the end of the Middle English period or in Early Modern English other verbal features were found, such as the ability to express distinctions of voice (1417 “without *being stolen*”, cf. Tajima 1985:113ff.) and tense/aspect (1580–81 “after *having failed*”, cf. Tajima 1985:111–113, Fanego 1996b:129ff.). Subject arguments in nongenitive form (14–15) occurred sporadically from Late Middle English, but remained very rare for a long time afterwards: in a 392,110-word sample from the Early Modern English section of the Helsinki Corpus of English Texts (HC, cf. Kytö 1996 [1991]) I recorded 51 instances of possessive phrases used as subject

2. Another recent study on the same topic is Moessner (1997), but it contains important errors.

arguments of gerunds and only nine of plain case noun phrases; the figures for possessive determiners and nongentive pronouns in the same sample were respectively 210 and two (Fanego 1998).

- (5) ?a1200 *Old English Homilies* 151/17–18 [Tajima 1985:107]:
 þe teares þe man wepeð for longenge to heuene ben cleped rein water oðer
 deu water
 “the tears that man weeps in longing for heaven are called rain water or
 dew water”
- (6) c1280 *Southern Passion* 394 [Tajima 1985:107]:
 Of þi comyng at domesday
 “of your coming at doomsday”
- (7) a1225 *Lambeth Homilies* 49/34–35 [Tajima 1985:104; *MED* s.v. *ending(e)2*]:
 Operis satisfactione ... þurh dede wel endinge³
 “... by the good fulfilment of the task”
- (8) c1330 *Rouland & Vernagu* 545 [Tajima 1985:102]:
 at his coming þare
 “at his coming there”
- (9) c1225 (?c1200) *Hali Meidenhad* 42/452–53 [Tajima 1985:101]:
 Hwel he bið et hame, alle þine wide wanes þuncheð þe to nearewe; his
 lokyng on ageasteð þe
 “while he is at home, all your spacious dwelling seems to you too nar-
 row; his attention frightens you”⁴
- (10) 1340 *Ayenbite of Inwyrt* 261/32 [Tajima 1985:102]:
 at uerste guoinge in
 “when first entering”
- (11) c1280 *Southern Passion* 1874 [Tajima 1985:101]:
 Vnder þe Monument 3eo stod wipoute wepyng sore
 “she stood close by the sepulchre without weeping bitter(ly)”

3. Like other ME nouns going back to OE strong feminines, ME *dede* “deed” (< OE *dæd*, GEN.SG *dæde*) could have a genitive singular form with a zero inflection, as in this example.

4. On *lokyng on* as “attention”, see Millett (1982:71). This line could also be interpreted as “looking at him frightens you”, with the possessive *his* functioning as an objective genitive, a construction very frequent at this stage with *-ing* nominals (Tajima 1985:42–45). Which of these two readings is preferred is irrelevant for the purposes of this paper, as will become apparent in §3.2.4 below.

- (12) c1300 (MS a1400) *English Metrical Homilies* 112/2–4 [Tajima 1985:76]:
 Sain Jon was ... bisi In ordaining of priestes, and clerkes, And *in casting*
kirc werkes
 “Saint John was ... busy ordaining priests and clerics, and in planning
 church works”
- (13) c1303 (MS a1400) *Handlyng Synne* HS 408 [Tajima 1985:76]:
yn feblyng þe body with moche fastyng
 “in weakening the body by too much abstinence”
- (14) c1378 *Piers the Plowman* (B-text) VIII 31–32 [Tajima 1996:573]:
 The wynde and the water and *the bote waggynge* Maketh the man many a
 tyme to falle
 “the wind and the water and the boat rocking often make a man fall”
- (15) c1400 *Laud Troy Book* 6317–18 [Tajima 1996:574]:
 he was war *of hem comyng* and of here malice
 “he was informed of them coming and of their wickedness”

As will become apparent in §3 of this paper, not all of Tajima’s examples can be accepted as providing satisfactory evidence of verbalization. Before considering this question in detail, let me first refer to other aspects of the development of the gerund which are also relevant to the present research. The first relates to the fact that, though the preliminary stages in the verbalization of the gerund can be dated relatively early, Donner (1986) has shown that gerunds governing direct objects remained very infrequent in Middle English. Using evidence from the letters A–O in the *Middle English Dictionary*, he collected ca. 2500 instances of *-ing* nouns followed (or, less often, preceded) by notional objects; of these over 90% were realized as *of*-phrases, and the rest as noun phrases. (See also the figures in Houston 1989: 182.)

Second, as made clear by Donner (1986), Koma (1987) and Houston (1989: 181), the gerund’s acquisition of direct objects started with those gerunds that were dependent on a preposition, as in (12)–(13) above. In other syntactic positions the use of direct objects and other verbal features was very slow to develop, as I have shown in previous research (1996a, 1996b, 1998, forthcoming) and as will be discussed in §4 below.

Third, there existed a clear correlation between the internal structure of gerund phrases and their acquisition of verbal syntax. Despite the sporadic occurrence in Middle English of examples like (4) above, both Tajima’s data (1985: 78ff.) and my own research (1996b, 1998) on the Early Modern period show that gerund phrases containing overt determiners or possessives acquired

direct objects and other verbal features much later than phrases lacking determiners (cf. (12)–(13) above). More specifically, to judge from data retrieved from the Helsinki Corpus, by the first (1500–1570) and second (1570–1640) subperiods of Early Modern English the proportion of NP objects (e.g., “by writing *it*”) with gerunds lacking determiners (henceforth: Type I gerunds) was respectively 43% (56 examples of 130) and 77% (106 examples of 138). By contrast, in the case of gerunds containing determiners (e.g., “by his/the writing *it*”; henceforth: Type II gerunds) NP objects reached a mere 1% in subperiod 1 (1 example of 94) and 10% (11 examples of 113) in subperiod 2.

Fourth, another important aspect of the grammar of the English gerund, whether nominal or verbal, is that throughout its history it appears to have been used more commonly after prepositions. More work is still needed regarding the exact frequency of prepositional gerunds in Old and Middle English, but on the whole the association of Middle English gerunds with prepositional use seems reasonably clear in the light of the evidence adduced by Houston (1989) and Expósito (1996). Houston (1989: 176) examined 1,464 *-ing* forms dating from the tenth to the seventeenth century and found that “across time, there is a fairly constant trend for them to occur as the objects of prepositions”. Expósito’s research, in turn, is concerned with the structure of the noun phrase in Chancery English ca. 1400–1450, hence she excludes from the count purely verbal gerunds — which at this date would be very few — and only provides data for the 135 nominal or partly nominal gerundial structures occurring in her 48,000-word corpus: 81.5% of these were found after a preposition, 12.6% were objects and a further 5.9% subjects (1996: 173–180). These figures are in agreement with my own findings for the Early Modern period: in a sample of 317,621 words in the EModE section of the Helsinki Corpus of English Texts, I recorded 1,286 gerunds (= 79.5%) functioning as prepositional complements, as against 332 (= 20.5%) in other clause functions (Fanego 1996b: 122–123).

With these data in mind, let us briefly consider in the pages that follow some of the factors that have been proposed in the literature in order to account for the remarkable development of the gerund outlined earlier in this section.

2.2 Potential sources of the English verbal gerund

As noted above, scholars have suggested a variety of sources from which the verbal gerund may have arisen. Most of these sources have been carefully assessed by Jack (1988) in a valuable article using the evidence provided by Tajima (1985) to examine the extent to which any (or all) of the following five

factors may have been involved in the acquisition of verbal properties by the *-ing* noun:⁵

1. merger of the *-ing* noun with the present participle;
2. the morphological productivity of the *-ing* noun;
3. constructions in which an *-ing* noun cooccurred with a genitive phrase;
4. influence from French;
5. the resistance of the infinitive to use following prepositions.

In the sections that follow Jack's views on these factors will be summarized and briefly commented upon, where appropriate.

2.2.1 *Merger of the -ing noun with the present participle*

In Old English the ending of the present participle (*-ende*) was distinct from the suffix *-ing/-ung* of the abstract deverbal noun. However, even in very early texts like *Lazamon* there occur some *-inge* endings for the present participle, and “by around 1200 the variants *-inde ~ -inge* are available for this category in the south [of England]” (Lass 1992:146), from where *-inge* gradually spread northwards into the Central Midlands. By the fifteenth century *-ing(e)* was the dominant standard form.

However, as Jack aptly notes (1988:25–27), the coalescence of the verbal noun with the present participle was not a feature of all dialects of Middle English. In the north of England the two endings remained distinct, with *-and(e)* being used for the participle and *-ing* for the verbal noun. As it happens, some of the earliest instances of verbal gerunds, such as (12) quoted above, are found in texts of Northern provenance, and from this Jack argues that “the development of the [verbal] gerund could take place quite independently of any merger between the verbal noun and the present participle” (p.27), though he nevertheless admits that “in practice it is likely that merger of the two forms did promote the use of the [verbal] gerund” once “this mode of construction had entered ME” (p.63).

5. Jack also examined five other sources: (a) influence from certain types of OE compounds; (b) influence from Celtic; (c) influence from Latin; (d) development of the gerund from the ME inflected and uninflected infinitives. As Jack shows, it seems unlikely that any of these had a significant role in the development of the English gerund, hence they have been left out of the discussion.

2.2.2 *The morphological productivity of the -ing noun*

Dal (1952: 29–41) suggested that the primary source of the verbal gerund lay in the morphological productivity of *-ing* nouns. During the Old English period and in Early Middle English, formations in *-ing/-ung* grew more numerous (Dal 1952: 23–28, Kisbye 1971: 51–52, 54; see also Dalton-Puffer 1996: 90ff.), so that it became possible to derive them from any verb, whether of native origin or borrowed from Norse or French. In this way, she argued, such formations came to have the same status in the verbal system as the infinitive and the participles, and were thus able to develop syntactic properties of the verb, such as the capacity to govern a direct object.

Jack, however, considers that “the pattern of attestation shown by ME forms in *-ing* ... gives reason to doubt Dal’s account of the origin of the English [verbal] gerund” (1988: 43). With this remark he is alluding to the marked resistance of Type II gerunds (e.g., *by the writing of it*), as defined in §2.1, to the acquisition of verbal features. In his view,

this suggests that the capacity to be followed by an object did not arise through a straightforward process of evolution affecting the verbal noun; for if it had done so, then it would be reasonable to expect that early instances of the form in *-ing* followed by an object would often retain the nominal property of being preceded by a determiner. (p. 44)

I will return to this special behaviour of Type II gerunds later in this paper, as it has considerable importance. Meanwhile, let me just point out that even if one doubts Dal’s account, it seems clear that the productivity of the *-ing* noun must have been, as Jack himself acknowledges, “a prerequisite for the development of the [verbal] gerund, since it furnished a copious set of deverbal nouns to which, through the operation of other factors, syntactic properties of the verb could subsequently become attached” (p. 45).

Note that a recent study by Dalton-Puffer (1996), based on evidence from the Helsinki Corpus, confirms the unique status of *-ing* nominals within the Early Middle English derivational system. Not only were *-ing* nouns fully transparent morphosemantically — they lacked any kind of morphophonemic alternation with respect to their bases, and their meaning was quite consistently an “act/process of doing x” (cf. p. 93), two necessary conditions for them to develop into an inflectional type —, but they were also extremely common. In the ME1 (1150–1250) section of the Helsinki Corpus, Dalton-Puffer (1996: 38, 90–91) records 159 types and 368 tokens of *-ing* nominals. In ME2 (1250–1350) there is a clear rise to 226 types and 512 tokens. These figures can be compared

with those obtained for *-ness*, at the time the next most common native suffix forming deverbal action nouns (e.g., *alesnesse* “deliverance”, *andetnesse* “confession”, etc.): ME1 yielded 27 types and 45 tokens, ME2 5 types and 40 tokens. With regard to nonnative suffixes also capable of deriving action nouns, such as *-acioun* (PDE *-ation*), *-age*, *-al*, *-aunce* (PDE *-ance*, *-ence*) or *-ment*, the evidence is even more revealing: in the case of *-acioun*, by far the most frequent of these formatives, there are 4 types/10 tokens in ME1, and 20 types/56 tokens in ME2.⁶ These data enable Dalton-Puffer to represent in this way the position occupied by OE and EME *-ing/-ung* on the inflection-derivation scale:

- (16) –obligatoriness
 +categorical change
 –specific semantics
 –applicability restrictions
 +many tokens
 +many types

As she notes (1996:38), for “the abstract noun suffix UNG/ING to shift towards the inflectional end of the inflection-derivation scale ... it only needed for the obligatoriness digit to switch to ‘+’ and for the categorical change criterion to become ‘±’ (participles are not as ‘different’ from verbs as abstract nouns)”.⁷

2.2.3 Constructions in which an *-ing* noun cooccurred with a genitive noun or phrase

Scholars like Curme (1912), van der Gaaf (1928) and Visser (1963–1973: §§1096–99, 1110–11) proposed that a source of the verbal gerund lay in OE

6. Since Dalton-Puffer (1996) is a study of suffixal derivation only, zero-derivation is excluded from her analysis. Action nouns could also be formed by this method in both Old and Middle English cf. OE *drenc* “drowning” (< OE *drencan* “drown”), ME *wrest* “action of twisting” (< ME *wrest(e)* v.). Many OE derivatives, however, were related to their bases by ablaut alternation (e.g., OE *bryce* “act of breaking” < *brecean* “break”, OE *cyme* “arrival” < OE *cuman* “arrive”), and hence lacked the morphophonemic transparency of *-ing/-ung* nominals, which derived exclusively from an unmodified infinitive stem. For this and other reasons discussed by Kastovsky (1990; 1992:382–383, 393–394), most of the OE zero-derived nouns disappeared from the lexicon in Middle English. With regard to ME formations such as *wrest* “action of twisting”, Marchand (1969 [1960]:373; see also Dalton-Puffer 1996:201) notes that while denominal verbs (e.g., *bridge* v. < *bridge* n.) obtained by zero-derivation have been very numerous since ME times, deverbal substantives are much less common.

7. Dalton-Puffer uses the term ‘participle’ for what I am calling verbal gerunds (1996:38, 90).

constructions comprising a noun (or noun phrase) inflected for the genitive and a verbal noun in *-ing/-ung*, as in *haligra boca rædinge* “reading of holy books”. In Old English such phrases usually carried an inflection overtly marking them as genitive in case, but a number of later morphological changes often brought about syncretism of the plain case and the genitive, thus giving rise to ME structures like *His fader biding* (*Cursor Mundi* 8445, Cotton MS, quoted in Jack 1988:48) or *by the mone shinyng* (cf. Kisbye 1971:58), where it is not possible to determine whether *fader* and *mone* are in the genitive or in the plain case. These constructions thus can have the appearance of verbal gerunds (but see my comments at the end of this section).

Jack (1988:47ff.) acknowledges that it seems likely that the type of construction with a plain-case subject + gerund, as exemplified in (14) above, “did arise in part from phrases with a genitive noun + verbal noun ... as an extension of the older genitive type, emerging after frequent syncretism of the genitive and the common case had developed in ME”. He notes, though, that case syncretism can also be observed in ME sequences involving head nouns other than *-ing* nouns, such as *thi brother wif* “thy brother’s wife” (Chaucer, *Troilus and Criseyde* i 678; quoted in Mustanoja 1960:72) or *the king hand* “the king’s hand” (*Cursor Mundi* 5410, cf. Mustanoja 1960:72), and yet this has not led to the development of a new construction in English: in all such cases the genitive ending *-s* was eventually generalized in the course of Middle English. He therefore concludes that “phrases with a genitive noun + verbal noun may well be a partial source of constructions in which a gerund is preceded by a subject..., but they cannot be their sole source” (p. 50).

I largely agree with Jack’s views on this issue, in particular because all the instances earlier than the late fourteenth century which Visser (1963–1973: §1099) adduces to illustrate the use of a “subject in the neutral or zero case” plus gerund are of the type exemplified by *his fader biding* or by quotation (14) above: that is, they do not exhibit a clearly sentential structure in that there are no dependents following the *-ing* form, as is the case, for instance, in unambiguous verbal instances such as (12) (*in casting kirc werkes*).

2.2.4 Influence from the French gerund

The French gerund, ending in *-ant*, had a number of different uses in Old French. The one relevant to this discussion is exemplified by sequences such as *ainz soleil esconsant* “before sunset” or *sor mon cors deffendant* “in defending my life” (cf. Jack 1988:50ff.), where the gerund is dependent on a preposition and may govern a subject (*soleil*) or an object (*mon cors*). As noted by Ménard

(1973: 174–175; quoted in Jack 1988: 60), the usual position in Old French for either of these functional elements was before the gerund.

By examining Tajima's collection of ME instances (1985), Jack concludes that "at the time of its emergence in Middle English the construction with a gerund + object had an association with prepositional use" (p. 55), an aspect of the grammar of the gerund that is also clear from the research of Donner (1986), Koma (1987) and Houston (1989), as I pointed out at the beginning of this paper. In its use after prepositions, therefore, the English verbal gerund matches the French gerundial construction. Unlike in French, however, the normal order for the direct object of ME gerunds was after the *-ing* form (for examples, see (12)–(13) above and Tajima 1985: 73–78). The fact that the syntax of the ME verbal gerund is thus not identical with that of the gerund in Old French leads Jack to the observation that "French influence is therefore to be regarded as a contributory factor in the development of the English gerund, but not as the sole or necessarily the chief factor" (p. 60).

2.2.5 *The resistance of the infinitive to use following prepositions*

The Old and Middle English infinitive, despite its characteristically nominal distribution (cf. Traugott 1992: 244ff., Fischer 1992: 333ff.), could not occur after prepositions other than the infinitival markers *to* and *for to* (though see Visser 1963–1973: §976 for some exceptions to this rule). There was therefore "a gap in the range of syntactic patterns in which the infinitive functioned as a nominal form of the verb" (Jack 1988: 61ff.), and hence Jack considers it likely that, as first argued by Einkenkel (1914: 22–25), "the development of the [verbal] gerund was either initiated or promoted by pressure to remove this syntactic gap".⁸

As I have pointed out elsewhere (Fanego 1996b: 124–125), I do not find Jack's views in this regard entirely convincing. As I see it, the resistance of the infinitive to being used after prepositions might explain the marked tendency for ALL KINDS of gerunds, whether nominal or verbal, to function as prepositional complements (see §2.1). In other words, it seems likely that the great expansion in the use of prepositions in the course of the Middle English period, as a consequence of the decay of the Old English inflectional system (cf. Mustanoja 1960: 348ff.), gave rise to a situation in which a form of the verb capable of being used prepositionally was often called for: the gerund may have served to fill this gap. But this process could have been independent of whether the gerund was syntactically nominal or verbal,

8. See Anderson (1993) and Miller (2002: Chapter 11) for a similar view.

for in sequences like *Wipouten doying of any harme* (cf. (1)) or *in casting kirc werkes* (cf. (3)) the advantage of the gerund over the infinitive does not depend on the nature of its object (i.e., *of*-phrase or noun phrase), but rather on its ability to occur in a syntactic position from which the infinitive was excluded.

2.2.6 Summary

Jack (1988) concludes his detailed analysis of the various sources⁹ proposed for the verbal gerund by pointing out that “[they] all appear to have had some role in the development of gerundial usages in English” (p. 63). In his view, the data available:

suggests that the development of the English gerund was brought about by the convergence of various contributory factors, as a result of which they were able to act in a concerted way, each reinforcing the effect of the others. The conclusion towards which the evidence points, therefore, is not merely that several distinct factors contributed to the emergence of the English gerund, but also that the effectiveness of these factors is likely to have been dependent on the way in which they dovetailed together. (p. 64)

9. Shortly after the publication of Jack’s paper, a new source was put forward by Houston (1989), who argued that the functional similarity between so-called appositive participles and certain *-ing* nominals led to the analogical transference of verbal properties from the present participle to the verbal noun. Appositive participles do not have an overt subject NP and by default are interpreted as sharing the subject of the matrix clause:

Old English: *ÆCHom* ii.578.28 [Mitchell 1985:§1434]:
and þæt folc ... ham gewende, *ðancigende þam Ælmihtigan ealra his goda*
“and the people went home, thanking the Almighty for his goodness”

From a semantic point of view, the relation holding between appositive participles and their matrix clause is often an adverbial one, and in this, as noted by Houston (1989), they resemble prepositional gerunds, which are also very often employed to provide supportive commentary about the time, manner, cause, means or goal of foregrounded events, as in “*on hearing a cry, she dashed into the garden*”. Houston therefore claims that the similar discourse function of appositives and prepositional gerunds “may have contributed to users’ association of the two forms and to the consequent verbal qualities of the modern verbal gerund” (p. 173). The chief justification for Houston’s position lies in the plausibility of such a development, and also in the fact that, as repeatedly noted, prepositional gerunds were indeed the first to acquire direct objects. It must be acknowledged, however, that the lead of prepositional gerunds could also be accounted for on the basis of the factors discussed in §§2.2.4–5. In addition, a second difficulty with Houston’s proposal is that it does not explain why the verbal properties of the participles were not transferred to the prepositional gerunds containing determiners (e.g., “for the writing of the book”), despite the fact that these, too, often served an adverbial function; on this issue see further below.

Though these remarks seem eminently sound, there is an intriguing aspect of the grammar of the gerund which has not yet received enough attention, either from Jack or his numerous predecessors. As noted earlier (§2.1), the categorial shift of the *-ing* noun started with a very specific type of structure, namely gerundial sequences functioning as prepositional objects and lacking overt determiners, such as ME *in ordaining of priestes* “in ordaining priests”. These, which I have referred to as Type I gerunds, were the first to develop verbal traits (e.g., ME *in casting kirc werkes* “in planning church works”), while related constructions with explicit determiners (e.g., ME *at the/his makyng of thys lettyr*) did not start acquiring direct objects until about two centuries later (Fanego 1998:106; see also §2.1 above). The significant difference in the rate of verbalization of these two types of gerund surely deserves an explanation, as it may throw light not just on the way in which verbalization proceeded, but also, as I see it, on the causes of it. Though it might be argued that Type II gerunds, being a more noun-like pattern because of their overt determiner, could be expected to acquire verbal traits at a later date, I find this position too facile. In the remainder of this paper I will therefore try to account for this hitherto unexplained aspect of the grammar of *-ing* forms in a more satisfactory manner.

3. The role of reanalysis in the inception stage of the change

3.1 Reanalysis (provisionally) defined

Langacker (1977) and Timberlake (1977) represent two early, influential, approaches to syntactic reanalysis. Timberlake’s definition — reanalysis as “the formulation of a novel set of underlying relationships and rules” (p. 141) — can be compared with Langacker’s more explicit one:

change in the structure of an expression or class of expressions that does not involve any immediate or intrinsic modification of its surface manifestation. Reanalysis may lead to changes at the surface level, ...but these surface changes can be viewed as the natural and expected result of functionally prior modifications in rules and underlying representations. (p. 58)

Though other formulations of reanalysis can be found in the literature (e.g., Lightfoot 1979, 1988, 1991, Haspelmath 1998), Langacker’s has been widely adopted in subsequent studies, such as Heine et al. (1991:215ff.), Harris & Campbell (1995:50–51, 61ff.), or Hopper & Traugott (2003 [1993]:50ff.). In their thorough monograph on syntactic change, Harris & Campbell discuss in

detail the preconditions for reanalysis to occur and argue that reanalysis may, but need not, involve opacity — as claimed, for instance, by Lightfoot (1979, 1988:308–309, 313). Instead, the only prerequisite to reanalysis is “the possibility of more than one analysis” for the structure in question (Harris & Campbell 1995:51), though, crucially, they stress that it is not essential that every token of a particular constructional type be open to multiple analyses, but simply “a subset of the tokens” (p.72). In this way, reanalysis or innovation in structure “can take place even while examples that unambiguously show the old structure are clearly available” (1995:72). This is also Croft’s view (2000:120) in his recent large-scale study of language change: “the precondition of formal grammatical ambiguity for reanalysis is too strong”, since “remappings between grammatical form and conventional function may violate existing UNAMBIGUOUS conventional mappings” [emphasis added].

Aside from the kind of conditions required for reanalysis to occur, also important in the formulation of reanalysis is whether this is, or is not, an abrupt process. In other words, when a form belonging to category X is reinterpreted as belonging to category Y, does this involve an abrupt change in the syntactic structure of the corresponding construction or is the change gradual? As will become apparent later in this paper, the answer to this question is of considerable importance for the specific change at hand, the development of English verbal gerunds. I will return to this issue in 4.1 below; in the meantime the sections that follow examine the relevance of reanalysis, as provisionally defined, for the initial stages of verbalization.

3.2 The syntactic patterning of *-ing* nouns in Old English and Early Middle English

3.2.1 *Determiners and -ing nouns*

In Old and Middle English, with many kinds of nouns and noun phrases, articles and other determiners are often not present in cases where they might be expected today; see Kisbye (1972:3, 8ff.), Kerkhof (1982 [1966]:361–363), Fischer (1992:219–220), and Traugott (1992:172–174) for details. With abstract nouns, absence of the article prevails in Middle English (Kisbye 1972:9). Other environments in which a ‘zero’ article was especially common included predicative position (e.g., OE *he was swyðe spedig man* ... “he was a very rich man ...”; ME *it is meruaylle* “it is a miracle”), and sequences in which the head noun was further specified by a following *of*-phrase or *þat*-clause, whether this was a relative clause (e.g., ME *with peyne that love me yeveth* “with the pain that love

gives me”) or a complement, as in expressions like *in hope that* (Fischer 1992:220). If the head noun was an abstract noun preceded by a preposition and followed by an *of*-phrase, then absence of the determiner was quite regular. Kisbye (1972:8), Kerkhof (1982 [1966]: 363) and Fischer (1992:219) adduce many ME examples illustrating these points, such as *þorgh vertue of þat ston* “by the efficacy of that stone”, *at requeste of the queene* “at the request of the queen”, etc.

The above observations will serve to explain the great frequency in Middle English of structures like (1), repeated here for easier reference, and (17), in which the *-ing* nominals are not preceded by a determiner (Tajima 1985:39, 60ff.):

- (1) ?a1300 *Kyng Alisaunder* 558 [Tajima 1985:62]:
 Wiþouten doying of any harme
 “without doing any harm”
- (17) a1359 *Midland Prose Psalter* 10.9 [Tajima 1985:63]:
 þe biginnyng of wysdome is dredyng of our Lord
 “the beginning of wisdom is dreading our Lord”

Since the ability to take articles is a defining property of most English nouns, both today and in earlier stages of the language, and the category of definiteness itself is a property of noun phrases, it could be said that NPs marked for definiteness (e.g., *the writing of the book*) are maximally different from VPs (*writing the book*). By comparison, bare NPs such as those in (1) and (17) exhibit fewer ‘nominal’ characteristics. In §3.2.6 below we will see how these differences can be related to the changes undergone by the gerund.

3.2.2 *-ing* nouns and complement clauses

OE action nouns in *-ing/-ung*, being nominalizations, could govern various types of complement clauses; Visser (1963–1973:§1004) quotes examples where forms in *-ing/-ung* are construed with clauses introduced by complementizers like *þæt* “that” or *hu* “how” (see also Traugott 1992:234). As there is no reason to think that this possibility ceased to be available to *-ing* nouns in Middle English, it is clear that example (18) below cannot be accepted as an early instance of the verbal pattern gerund + direct object, as Tajima (1985:76), and Denison (1993:403) following him, assert. Note the absence of a determiner before *asking*, as discussed in the preceding section:

- (18) ?a1300 (MS c1330) *Arthour and Merlin* 1301–02:
 þe messenger made anon asking *Whi he made swich leizeing*
 “the messenger immediately asked the question why he was telling such lies”

Noun clauses suggest verbal syntax, and this explains Tajima's misinterpretation. He is not alone in this: discussing *-ing* nominals in the fifteenth century, Donner (1986:399) speaks at length of the set of rules governing Reginald Pecock's use of the gerund; one of them he considers "mandatory", in that "when an *-ing* noun ... has a noun clause as its object", Pecock invariably resorts to a 'verbal' structure such as the one in (18) above. But, needless to say, the most one can say about such structures is that they show no positive evidence of either nominal or verbal usage. In this respect, therefore, they constitute one of the subsets of gerundial sequences which in Early Middle English (and likewise in Old English) were open to the possibility of more than one structural analysis. They were not the only subset with such characteristics, however, as will become apparent shortly.

3.2.3 *-ing* forms governing prepositional phrases and adverbs

As noted in §2, Tajima classifies examples (5)–(8) — respectively, ?a1200 "for longenge *to heuene*"; c1280 "Of þi comyng *at domesday*"; a1225 "þurh dede *wel endinge*"; c1330 "at his coming *þare*" — as gerunds exhibiting the verbal trait of taking adverbial modification. In (5) *to heuene* is the prepositional complement of the *-ing* noun *longeng(e)* "longing, grief" < OE *langung*, a derivative of *langian* "long". In Old English, *langung* subcategorized for a genitive phrase (e.g., *Blick. Homl.* 135: *mycclan langunga heora ðæs leofes Hlafordes* "great longing after their dear [departed] Lord"), though instances with a prepositional complement, as in later stages of English, can be found as well (e.g., *Blick. Homl.* 131, 26: *langunga habban æfter ðam freondum* "have longing for the [dead] friends"; see Bosworth & Toller 1898/1921). Such prepositional phrases, and others of the same kind adduced by Tajima (1985:107–108), can be governed by both nouns and verbs (compare PDE *belief in God*, *admiration for his courage*, etc.), and hence cannot be accepted as evidence of the verbalization of the gerund. They are important, however, in that, just like the noun clauses referred to earlier, they too are open to more than one structural interpretation.

Much the same applies to *at domesday* in (6) (cf. Tajima 1985:107–108 for similar sequences); phrasal adverbials of this kind, indicating time, place and other related circumstances, have been available as modifiers in both NP and VP structures at all stages of English, as recognized by Visser (1963–1973:§1035), Donner (1986:395) and Jack (1988:56–58) in their discussions of the gerund.

Let us consider next "at his coming *þare*" and "þurh dede *wel endinge*". These illustrate the use of various types of adverbs as modifiers of an *-ing* form. To judge from Mitchell (1985:§§1100, 1108), adverbs modifying nouns were

not frequent in Old English — “straws in the wind”, he terms them. In §1100 he mentions *Bede* 410.13 (*min giu magister* “my former master”), and suggests that in *Solil* 64.32 (*Ne wene ic na þæt þæt lyf þær beo butan gewitte*) the adverb *þær* is probably not a modifier of *lyf*, but of the copula *beo*: that is, “I do not believe that life is there without intellect”, rather than “... that life there is without intellect”. In a later section (§1108) he talks at greater length of there being “as in MnE, a certain amount of overlap in the functions of adjectives and adverbs”, and adduces *Bede* 436.28 (*mid ofercyme sæmninga deaðes*), where *sæmninga* can only be an adverb modifying the preceding action noun *ofercyme* “arrival” (< *ofercuman* v.); this gives us, literally, “by the arrival suddenly of death”, which is interesting in that it might indicate that action nouns were more ‘verbal’ in Old English than they are today.

Summing up, there is thus some limited evidence that even in Old English it was possible to find examples of adverbs used as noun modifiers. In Middle English, however, this became much more common, as aptly pointed out by Jack (1988:56; see also Mustanoja 1960:649), who adduces many examples involving time and place adverbs, some of them dating back to very early in Middle English, cf. ?a1200 *AncrW*. 12b/26 *þe world wiðuten*, a1400 *PrickC* 7539 *þe way þiderward*, etc. Such kinds of sequences have since become fully acceptable in English; witness PDE “circumstances today” or “the journey back”. It follows from this that the cooccurrence of ME *þære* “there” with an *-ing* form, as in Tajima’s “at his coming *þære*” (cf. Tajima 1985:102 for other examples), cannot be taken to indicate that the gerund had acquired the verbal property of governing spatial and temporal adverbs, for such a possibility was also available to nouns. What is of interest, however, is that the growing use of such sequences in Middle English no doubt contributed to increasing the categorial indeterminacy of *-ing* nominals.

If we now turn to Tajima’s gerundial examples with other adverbs, such as “þurh dede *wel* endinge”, these are a bit more difficult. *Well* itself could certainly be used in Middle English as a noun modifier in attributive position: Mustanoja (1960:649) quotes ?a1200 *Lazamon’s Brut* A 14685: *for his wel dede* “for his good deed”. In the other examples prior to 1300 adduced by Tajima (pp. 101, 104) the items involved are *again* (2 examples), *fast* (2 examples) and *together* (?a1300 *Arth.&M.* 4655–56: *And in her togider coming ...* “and at their coming together ...”). I have not been able to find any evidence pointing to an early use of these as noun modifiers, so those five examples may well be genuine cases of *-ing* forms taking adverbial modification restricted to cooccurring only with verbs (but see 3.2.5 below on *fast*).

3.2.4 *-ing forms and particle verbs*

As suggested by Donner (1986:395) and Jack (1988:57), examples such as (9) above (c1225 “his *lokyng on ageasteð þe*”; see also example (10) 1340 “at *uerste guoinge in*” and Tajima 1985:101–103) are probably to be interpreted as verbal nouns obtained through direct derivation from the verb-particle combination, and not as indicating adverbial modification of the *-ing* form. *Lokyng on* “attention” would thus be the verbal noun corresponding to the verb *loken on*.

Comparable examples with an explicit notional object realized as an *of*-phrase, which Tajima interprets as exhibiting hybrid (i.e., *nomino-verbal*) syntax, also seem to provide confirmation that particle verbs behaved as a unit for the purposes of nominal derivation:¹⁰

- (19) c1303 Mannyng *Handlyng Synne* 1482 [Tajima 1985:102]:
By þe drawing up of hys honde

As is well known, verb-particle combinations are essentially an Early Middle English development. According to Burnley (1992:422–423, 444, and see also Strang 1970:275):

The earliest record of the extensive use of verb + preposition/adverb colligations as phrasal verbs on the model of Old Norse is in the *Peterborough Chronicle*: *gyfen up...*, *faren mid*, *leten up* and *tacen to*. The *Ormulum* contains numerous examples.

It is easy to see that the proliferation of gerunds followed by particles must have given rise to a constructional type which, like those discussed in the preceding sections, was structurally ambiguous and could, as aptly noted by Donner (1986:395), eventually lead “to a notion that *-ing* nominals were open to adverbial modification in general”. An example like (10) above (1340 *Ayenbite of Inwyt* 261/32: “at *uerste guoinge in*”) is particularly interesting in this regard; despite its apparent verbal structure, it could also be interpreted as a nominal gerund: noun phrases with a zero determiner were frequent in Middle English, as noted in §3.2.1, *uerste* “first” had adjectival and adverbial uses in both Old and Middle English (Bosworth & Toller s.v. *fyrst*; *OED* s.v. *first* a. and adv.), and *guoinge in* might be some kind of nominal compound.

10. Genuine hybrids, with movement of the particle to clause-final position, can be found at a much later stage, cf. examples (28)–(29) below.

3.2.5 *-ing forms and the adjective/adverb interface*

I referred in §3.2.3 to the functional overlap between some adjectives and adverbs in Old and Middle English. Here I will be concerned with their frequent identity in form.

In Old English, adverbs were derived from adjectives by means of the suffix *-e*: *heard* “hard, severe” > *hearde* “severely”; *sar* “sore, grievous” > *sare* “sorely, grievously”, etc. If the adjective stem ended in *-e*, already in Old English there was no formal distinction between the adjective and the adverb: *blithe* “blithe(ly)”, *deore* “dear(ly)”. See Campbell (1959:275ff.), Mustanoja (1960:314), Kisbye (1971:176), and Schibsbye (1977:92ff.) for details.

The increasing weakening of vowels in unstressed syllables in Late Old English and Early Middle English, and the consequent loss of final *-e*, obliterated the formal distinction between adjectives and adverbs in many cases, as still seen in PDE *fast, hard, loud, quick*, etc. (see among others Mustanoja 1960:314, Burnley 1982:172, Minkova 1991:131–132). The resulting confusion, coupled with related developments such as the addition of unetymological final *-e* to the stem of a form which did not have a corresponding final vowel in Old English (Minkova 1991:55ff.), led to a situation in which many *e*-forms in Middle English were ambiguous as to whether they identified adjectives or adverbs.¹¹ A case in point is (11), where *sore*, as pointed out by Jack (1988:57), could be either:

- (11) c1280 *Southern Passion* 1874 [Tajima 1985:101]:
 Vnder þe Monument 3eo stod wipoute wepyng *sore*
 “she stood close by the sepulchre without weeping bitterly / without
 bitter weeping”

Finally, various other phonological and/or morphological processes also brought about the coalescence in Middle English of some common adjective and adverb forms, such as *muchel* “much” (*OED* s.v. *mickle* A.1.d & C.1). This is used in one of the quotations which Tajima (1985:101) adduces as an early instance of ‘gerund + adverbial modification’, namely ?a1200 *Trin.Hom.* 55/14–17: “on etinge *to muchel* on estmetes”. Once more, either a verbal (i.e., “in dining too much on dainty food”) or a nominal (i.e., “in too much eating of dainty food”) reading would be possible.

11. The need to avoid ambiguity led to the spread of the adverbial suffix *-lice* “-ly”, as discussed by Pounder (2001) and others.

3.2.6 Concluding remarks

As noted in §2.1 of this paper, example (12) (c1300 “in casting *kirc werkes*”) is the first indisputable instance recorded by Tajima (1985) of a gerund governing a direct object. Prior to 1300, Tajima adduces some 50 examples of Type I gerunds governing *of*-phrases (e.g., *Wiþouten doying of any harme*, cf. (1) above),¹² 14 examples of gerunds of Type II taking *of*-phrases (e.g., *þe preching of oure lordes lawe*),¹³ and some 29 gerunds which he interprets as verbal, either because they govern a noun clause (2 examples)¹⁴ or are followed by what he terms ‘adverbial modification’ (27 examples; see pp. 101, 104, 107). In at least 24 of these 29 cases, the alleged verbal constituents belong to one of the subtypes which I have described in the preceding sections as being available in both NP and VP structure.¹⁵ This provides some indication of the extent to which the various phonological, morphological and syntactic developments taking place in Late Old English and Early Middle English had contributed to increasing the categorial indeterminacy of *-ing* nominals. It is true, of course, that the same developments affected other classes of nouns, but *-ing* nouns alone exhibited a range of properties that set them apart and made them unique candidates for a shift towards the verbal end of the nomino-verbal scale, namely:

- a. they preserved the argument structure of the base verb;
- b. they had unlimited productivity and full morphosemantic transparency (see §2.2.2);
- c. they were exposed to the influence of the various subsidiary factors examined in §2.2 (cf. also fn.9).

It is equally clear, though, that for the *-ing* nouns to start acquiring direct objects a further requirement was the availability in Middle English of one or more surface patterns having “the potential for multiple structural analyses” (Harris & Campbell 1995:72), and which could thus serve as the basis for the

12. For these 50 instances, see Tajima (1985:62) and the first five quotations in §4: ‘Adjectives’ on p.70.

13. See Tajima (1985:67), and also pp.69 (the example from *SLeg.* 62.173), and 71 (*HMAid.* 36/386).

14. See Tajima (1985), p.76 (?a1300 *Arth. & M.* 1301–02) and p.88. fn.52 (*NHom.Pass.* 1624–25).

15. Note that I am not implying that all of these 24 examples can be considered ambiguous: in cases like (6) (“Of *þi* comyng at domesday”) or (9) (“*his* lokyng on ageasteð *þe*”) the overt determiner would have been enough to mark the gerund phrase as a nominal construction.

reanalysis of a nominal structure as a (more) verbal one (on this issue see further §§4.1–2 below). That surface pattern, as I see it, was provided by ME sequences like (5), (7), (10), (11) or (18), in all of which the dependents of the *-ing* form were categorially ambiguous, and there was no determiner marking the gerund phrase as overtly nominal. In other words, crucial for the verbalization of *-ing* nouns was no doubt the great frequency with which abstract noun phrases with a zero article were licensed by the grammar of Middle English, as noted in 3.2.1 above. It is in this way, I believe, that we can explain why the gerunds of Type I (*writing of it*) acquired verbal properties much earlier than those of Type II (*the/his writing of it*). In turn, the fact that within Type I gerunds the prepositional ones (e.g., *by writing of it*) led the change and were the first to govern direct objects may have been due to the influence from one or more of the factors discussed in §2.2 and also to their much greater frequency by comparison with the less common subject and object gerunds. In connection with this, we may recall that morphosyntactic change is often alleged to take place in unmarked environments before marked ones (see Smith 2001: 203–206), and at least in purely quantitative terms prepositional gerunds were clearly the unmarked pattern.

To conclude, the changes the English gerund underwent testify to the correctness of Harris & Campbell's claim that "reanalysis does not depend upon opacity or upon a lack of evidence supporting the old analysis" (1995: 72), but rather upon the speakers' recognition of multiple structural analyses: nominal gerunds remained available in Middle English, so that speakers had all the information they needed to make the old analysis. Yet a new, innovative analysis was applicable to a subset of gerundial structures, and came to coexist with the old one. A good example of this coexistence is provided by example (12), which was quoted above as the first unambiguous instance of a verbal gerund known to date:

- (12) c1300 (MS a1400) *English Metrical Homilies* 112/2–4 [Tajima 1985: 76]:
 Sain Jon was ... *bisi In ordaining of priestes, and clerkes, And in casting
 kirc werkes*
 "Saint John was ... busy ordaining priests and clerics, and in planning
 church works"

4. The actualization of the change

4.1 The reanalysis-plus-actualization model of syntactic change

As already noted, Timberlake (1977) first stressed the importance of distinguishing between *reanalysis*, the formulation of a novel set of underlying relationships and rules, and *actualization*, the gradual manifestation of the innovated underlying structure at the observable level of language use. Implicit in this model of syntactic change, which has been adopted in studies such as Lichtenberk (1991: 38–39), Harris & Campbell (1995: 77ff.), Hopper & Traugott (2003 [1993]: 64–65, 68), or Harris (2003), is the view that reanalysis involves only the introduction of an alternative syntactic structure for a construction, even if there is no visible change at the surface; actualization, by contrast, is the production of a previously unattested grammatical structure based on the reanalysis of the construction. It follows from this that, as pointed out by Hopper & Traugott (2003 [1993]: 64), “the products of analogy [i.e. actualization], since they are overt, are in many cases the prime evidence ... that a change has taken place”. To exemplify with the gerund, it is only when clear verbal instances such as (12) above occur that we can have definite evidence for the change in structure.

This reanalysis-plus-actualization model of gradual syntactic change has been challenged by Haspelmath (1998). In his view, most of the gradual changes which in the relevant literature are subsumed under actualization, and also many of those commonly considered to be cases of reanalysis, should better be analysed as grammaticalization processes — an issue to which I will return in §5 below. In addition, Haspelmath objects to the way in which reanalysis itself is defined by some proponents of the above model, most notably Harris & Campbell (1995), for whom “reanalysis itself is a discrete process, though the actualization process through which it meshes with the grammar is more gradual” (p. 49). Under discussion here is the question which I first raised in §3.1 above, namely: when a syntactic form belonging to category X is reinterpreted as belonging to category Y, does this involve an abrupt change in the syntactic structure of the corresponding construction or is the change gradual? To judge from the above definition (see also p. 63), the answer of Harris & Campbell (1995) appears to be that reanalysis is discrete and sudden, though in other places their position in this regard is considerably less clear:

the reanalysis of category (so a form comes to have a new or different lexical or grammatical category from what it originally had) MAY VERY WELL EVEN

REQUIRE an abrupt change in individual speakers' conceptualization of it in order for the new interpretation to be available. (Campbell 2001a:147) [emphasis added]

Be that as it may, Haspelmath (1998:327ff., 1999: 1045, 2002: Fig.1) rejects the existence of abrupt changes involving the reanalysis of category labels. Instead, he argues strongly that changes in word-class are gradual rather than abrupt: "verbs do not turn into prepositions and complementizers overnight, but lose their verbal properties and acquire the properties of their new word-class step by step" (1998: 329). To solve the descriptive dilemma posed by categories showing split behaviour, he suggests (p.330) that eventually formal models of syntax

will have to allow for gradience of membership in word-classes by introducing graded notations, for instance $V_{1.0}$ for ordinary verbs, $V_{.7}/P_{.3}$ for preposition-like verb forms (e.g. *considering*), $V_{.2}/P_{.8}$ for verb-like prepositions (e.g. *during*), and so on. Word-class changes will then look gradual even in formal representations, e.g. $V_{1.0} > V_{.9}/P_{.1} > V_{.8}/P_{.2} > \dots > V_{.1}/P_{.9} > P_{1.0}$.¹⁶

As will be seen in due course, this conception of lexical/syntactic categories as continua can be fruitfully applied to the English gerund. It will therefore be used in the sections that follow, in combination with the reanalysis-plus-actualization model of syntactic change outlined earlier, in order to account for the emergence from Middle English onwards of a number of innovative gerundial patterns. These are exemplified, and their structure briefly discussed, in 4.2 below; the process of actualization itself will be the topic of §§4.3–4.

16. Haspelmath seems to be echoing an earlier statement by Heine et al. (1991:231–233) with regard to the discrete vs. continuous nature of grammaticalization processes:

[s]omewhere halfway between *X* and *Y* there is a stage where the entity concerned cannot be described as being either primarily *X* or primarily *Y* since it is made up of a proportionate amount of properties of both categories. When such a stage is reached, we propose to talk of intermediate or hybrid forms ... Hybrid forms pose a constant problem to students of grammar who have been brought up to analyze and describe language in terms of discrete, clear-cut categories, What is required therefore is a framework for linguistic description that is not confined to static, discrete units such as word classes or constituent types but rather includes dynamic entities ... among the fundamental taxa of linguistic analysis.

For criticism of this position see Newmeyer (1998: 165ff.).

4.2 English verbal gerunds: Their types and internal structure

Unlike §§2 and 3 of this paper, which relied chiefly on the Middle English evidence collected by Tajima (1985), this and the following sections draw upon my own research on the development of the gerund in Early and Late Modern English (Fanego 1996a, 1996b, 1996c, 1998, 2004, forthcoming). My discussion will be necessarily brief, partly for reasons of space, and partly because the interested reader can refer to the above collection of papers for further details.¹⁷

From Middle English onwards, three different classes of gerunds exhibiting varying degrees of verbal properties became available in the language:

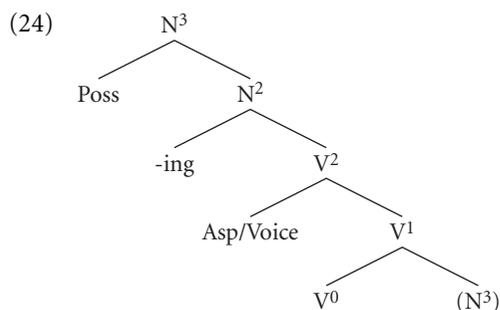
- (20) HC 1568 Turner *A New Boke of ... All Wines* B4R: I haue knowen three ... in high Germany that toke the falling sicknesse *by drinking much newe Rhenishe wine*,
- (21) HC 1673 Taylor *Sermons* 13: the noblest End is *the multiplying children*.
- (22) HC 1685 Lisle *Trial* IV, 123C1: And for that white-headed Man that speaks *of my denying them*, as I said before, he was one of them that rifled and plunder'd my House,
- (23) HC 1698 Fiennes *Journeys* 152: There are a great deale of Gentry which lives in town tho' there are no good houses ... its a very dear place *so much Company living in the town* makes provision scarce and dear, however its a good excuse to raise the reckoning on strangers.

Examples (20) and (21)–(22) arise, respectively, through the verbalization of the nominal types which I have been referring to as Type I (i.e., without an initial determiner) and Type II (with an initial determiner). The two examples of the latter type are categorially hybrid: they govern NP objects, but retain nominal traits such as the presence of a definite article in (21), and of a subject argument (*my*) realized as a possessive phrase in (22). The subtype with a possessive is still grammatical today, though it is largely restricted to formal written English (Huddleston & Pullum 2002: 1192). The mixed subtype in (21) was frequent in

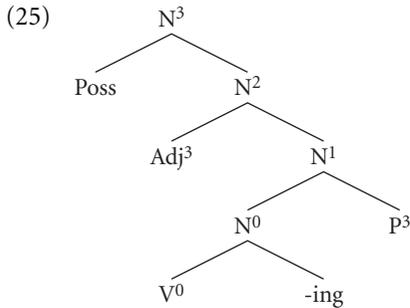
17. The following abbreviations will be used henceforth to indicate the source of each example in the quotations from Early and Late Modern English: HC (= Helsinki Corpus, 1500–1710, a sample of 392,110 words), COPC (= Century of Prose Corpus, 1680–1780, a sample of 240,000 words), ECF (= Chadwyck-Healey's Eighteenth Century Fiction, 1705–1797, a sample of 360,000 words), NCF (Chadwyck-Healey's Nineteenth Century Fiction, 1849–1872, a sample of 200,000 words). For further details on these corpora and text samples, see Fanego (1998, forthcoming).

earlier stages of the language, but went out of use by about the middle of the nineteenth century (cf. Fanego: forthcoming). Finally, the gerund in (23) will be identified henceforth as Type III. In this verbal pattern, the historical process of changing from noun to verb has been taken a step further than in Type II: there is nothing noun-like about its internal structure, and the surface subject (*so much Company*) of the *-ing* form is marked for the plain case.

In the relevant literature, Present-day English verbal gerunds, and in particular hybrids such as (22) — commonly referred to as POSS-*ing* gerundives or gerundive nominals —, have been a favourite topic of investigation since the early days of generative grammar. For surveys of the many studies devoted to these, the reader is referred to work by Jackendoff (1977:221ff.), Abney (1987), Pullum (1991), Yoon (1996), Miller (2002:282–299). Despite the great diversity of solutions proposed by these authors, they all share the view that, in order to account for the conflicting properties of gerundives, their derivation must include the recognition that they are verbal up to a certain level of structure, and nominal at a higher level. Jackendoff's (1977:51–53, 223) oft-quoted analysis of the sequence *John's having left* will serve to illustrate these points:



The assumption is that “gerundives have the constituent structure of sentences up to the X^2 level and that of NPs above that” (p. 223). To generate the structure in (24), Jackendoff adds a deverbalizing phrase structure rule (= ‘Deverbalizing Rule Schema’) of the form $N^2 \rightarrow \text{ing} - V^2$. Subsequently, *ing* undergoes Affix Hopping to attach to the first verbal form. By contrast, a nominal gerund such as *John's constant reading of magazines* would have the structure in (25), where the deverbalizing rule operates at the N^0 level, instead of at the N^2 level, as is the case with the verbal gerund.



In a recent paper, Tabor & Traugott (1998:240ff.) have applied Jackendoff's analysis to the development of the gerund since Middle English times, and have proposed that it passed from the (nominal) V^0 stage through a V^1 stage to the V^2 stage. On the basis of the evidence provided by Tajima (see §2.1 above), they suggest that around 1250 there was a $V^0 \rightarrow V^1$ transition manifested, for instance, in the acquisition of direct objects; it was followed by a $V^1 \rightarrow V^2$ transition taking place around 1550, the stage at which perfect ("after *having left*") and passive ("without *being stolen*") gerunds were first recorded. The conclusion is reached, therefore, that the modern gerund construction emerged "incrementally" (p. 244).

It will indeed be argued in §4.4 below that the spread of the verbal gerund across the grammar of English was a gradual process, in the sense that some subtypes of the new construction became possible before others. This granted, it is by no means clear that the proposal of Tabor & Traugott (1998) can adequately account for the complex combinations of nominal and verbal properties that gerunds could exhibit in earlier stages of English. Witness in this respect (26)–(33):

- (26) 1569 Hart *Orthographie* 71 [quoted from Jespersen *MEG*:§8.4.9]: Quintilian's order *touching teaching of childer [= children] their letters*. [of-phrase as notional indirect object + NP object]
- (27) 1625 Fletcher *Honest Man's Fortune* (ed. Gerritsen) IV.i.30 [quoted from van der Wurff 1997]: a man whose neede nere frighted you *from calling of him friend*. [of-phrase as notional object + predicative complement]
- (28) HC 1602 Clowes *Treatise for the Artificiall Cure of Struma* 33: in those Strumas that are fastened but to a thinne and slender roote, you shall binde them about and pluck them out. This last action ... doth [not] require any great curiosity, but a decent and artificiall strong binding, meete *for the plucking of them out by the rootes*. [of-phrase as notional object + particle]

- (29) ECF 1722 Defoe *A Journal of the Plague Year* 44: I mention'd above *shutting of Houses up*. [*of*-phrase as notional object + particle]
- (30) HC 1665 Hooke *Micrographia* 13.5, 45: either hammering, or filing, or *otherwise violently rubbing of Steel*, will presently make it so hot as to be able to burn ones fingers. [manner adverb + *of*-phrase]
- (31) HC 1666–1667 Pepys *Diary* 414: He is of my mind, *against having of eighths unnecessarily* in composition. [*of*-phrase + *-ly* adverb]
- (32) HC 1666–1667 Pepys *Diary* 416: I to my chamber and there to ticket a good part of my books, in order to the Numbring of them — *for my easy finding them to read*, as I have occasion. [possessive determiner + adjective + pronominal object]
- (33) HC 1698–1699 *Statutes VIII*, 587: An Act *for the more effectuall preserving the Kings Person and Government* [definite determiner + adjective phrase + NP object]

Structures such as these are recorded in particular with gerunds of Type II, as in (28) and (32)–(33), and somewhat more rarely with those of Type I (i.e., (26)–(27), (29)–(31)).¹⁸ They can be found throughout Middle English, but become much more frequent from the end of the sixteenth century, that is, coinciding with the time when verbalization was becoming widespread with the prepositional gerunds of Type I (cf. the figures for EModE given in 2.1 above) and was being extended from them to other structural types and to all clausal environments, as will be more fully discussed in §4.4 below.

In my view, what the occurrence of such examples suggests is that the English gerund long remained a genuinely hybrid form. It seems revealing, for instance, that the very same speakers responsible for hybrid structures such as those quoted above could also produce fully verbal instances, including some with perfect and passive forms. In my data, this applies to John Evelyn, Samuel Pepys, John Dryden or Daniel Defoe.¹⁹ It would therefore be a gross oversimplification to claim, as is done by Tabor & Traugott (1998), that from about

18. For further examples see Jespersen (*MEG*: §§8.4.9, 9.3.3), Söderlind (1958: §§537, 539, 542–3, 550, 563), Visser (1963–1973: §§1121 [the example from 1894 Ward], 1124), Tajima (1985: 65, 69, 81–82), Fanego (1998: 109ff.).

19. Cf. HC 1666 Pepys *Diary* 417: “and then home to supper and to bed, after *having finished* the putting of little papers upon my books, to be numbered hereafter.”

1550 English gerunds were verbal up to the V² level and nominal above that.²⁰ Rather than this, it seems to me that the development of the gerund involves an initial stage in Early Middle English during which the ambiguity of the various surface patterns discussed in §3.2 made it possible for language users to reinterpret the *-ing* nominal as a form that was sufficiently verb-like as to govern, for instance, direct objects. As repeatedly noted, this stage, which can be referred to as the reanalysis stage, appears to have been reached around or before 1300 (cf. (12) above: *in casting kirc werkes* “in planning church works”). The change taking place at that time, however, is unlikely to have been an abrupt one from N to V, with concomitant reanalysis of NP as VP, for in that case we would not expect to find Type I gerunds such as those illustrated in (26)–(27) or (29)–(31). In other words, my proposal is that, in order to account for such hybrid structures, we need to resort to an explanation along the lines suggested by Haspelmath (cf. §4.1) or, within the framework of notional grammar, by Anderson (1993); for both these authors, word-class membership

20. A good example of the problems posed by hybrid forms for formal models of grammar is provided by Miller's (2002:315–350) minimalist analysis of the development of English gerundives. He assumes, despite all evidence to the contrary, that by the fifteenth century verbal gerunds were “rampant” (pp. 8, 378) in all syntactic environments, whether prepositional or not. For him, the verbalization of ME *-ing* forms “is categorical, not gradual. Either the *-ing* form can take a direct object or it cannot. If it can, it has voice (active), aspect, and triggers adverb modifiers ... There is no syntactic evidence for a gradual acquisition of verbal qualities” (p. 344); and again on p. 347: “the core syntax of the gerundive (except for the presence or absence of an article) has been in place since Middle English”. In keeping with these views, he dismisses the two instances of hybrid gerunds that have come to his notice, namely Chaucer's “by receyvynge worthily of the precious body of Jhesu Crist” (c1390 *CT Parson's Tale* 385) and Ben Jonson's “*the quickly doing of it*, is the grace” (1610 *The Alchemist* (Everym. Libr.) IV, ii, p.62). About the former, he concedes (p.333) that “the adverb *worthily* should signal a gerundive [i.e. a verbal gerund], but what does one do with the *of*”; he therefore ends up concluding that the *of* is not case assignment by a nominal but rather a partitive marker, as in ME expressions like *of smale houndes hadde she* “she had some small dogs”. Yet while there is no evidence for the use of *receive* with a partitive object introduced by *of* (cf. *MED*, *OED* and Visser 1963–1973:§376), its use with a direct object in the sense “to participate in, take (the sacrament or sacred elements)” is very well documented, as in c1375 *XI Pains of Hell* 188 “pese... neuer resayuyd cristis body”. Between 1350 and 1460 the *MED* (s.v. *receiven* 4.b) adduces 14 examples of this kind, some of them involving the adverb (*un*)*worthily*, as in Chaucer, cf. c1410 *Dives & P.* 2.239 “men in Estryn receyvyn vnworþiliche Goddis flesch”. With respect to Jonson's *the quickly doing of it*, Miller's proposal is that it is “possible that *quickly* is not an adverb at all, but on a par with *goodly* in a *goodly amount* ... and therefore could mean something like ‘adequately rapid’”; as in the previous case, historical evidence supporting this interpretation of the adverb *quickly* is lacking.

is a matter of degree, and hence a syntactic category which was originally preponderantly nominal, such as the EME *-ing* noun, might in the course of time, given the appropriate conditions, develop into one with preponderant verbality, as is the case with PDE gerunds.²¹ In between these two extremes there is a long period — the reanalysis-plus-actualization stage — during which several substages can be identified. Roughly until the early eighteenth century, for instance, gerunds could exhibit practically any combination of nominal and verbal properties, as can be seen from the examples cited above. In the course of the eighteenth century, however, this cooccurrence of nominal and verbal features became greatly restricted: as I have demonstrated elsewhere (Fanego: forthcoming), only determiners, whether possessives or articles, remained compatible with verbal gerunds (e.g., *the/his writing it*, cf. (21)–(22)), while the more complex hybrid types represented by (26)–(33) went out of use.²² Finally, from the end of the eighteenth century, extralinguistic factors such as pressure from prescriptive norms, coupled with complex language-internal changes, played a crucial role in the obsolescence of the verbal type with an initial definite article (e.g., *the writing it*). As a result of this drawn-out process, by the middle of the nineteenth century the gerundial patterns available in the language were largely the same as in PDE, namely, those represented by (20) (*by drinking ... wine*), (22) (*of my denying them*) and (23) (*so much Company living in the town*), though their relative proportions of use differed considerably from today.²³

21. PDE gerunds, including fully verbal ones such as “*there being no handle to the suitcase makes it difficult to carry*”, have a characteristically nominal distribution, hence, as Anderson (1993: 16ff.) would put it, they cannot be analysed as a “primary category P” (where P stands for Predicative, i.e. ‘verb’).

22. In a sample of 800,000 words covering the years 1700–1872, I recorded 12 hybrid examples of this type, the last dating back to 1752, out of 888 Type II gerunds. Type I gerunds, despite being much more numerous (cf. Table 1 below), did not yield any hybrid instances.

23. Needless to say, even as late as the nineteenth century one may find occasional hybrid examples comparable to (26)–(33) above, such as “the shutting *of the gates regularly* at ten o’clock” (1818 Mary Shelley *Frankenstein*, quoted from Denison 1998: 271), and well into the twentieth century verbal gerunds introduced by a definite article, as in “*the being too weak to make it through a complete rehearsal*” (1991 *Long Shots* 10:1, quoted from Pullum 1991: 797), remained possible. As Huddleston & Pullum (2002: 1189) aptly put it, such examples, “which can arise when a historical change has not been fully carried through to completion, ... resist elegant description”.

4.3 Mechanisms at work under actualization

The preceding section has offered an overview of the classes of verbal gerunds which can be identified from Middle English onwards. The spread of each of these classes across the grammar of English will be examined in detail in 4.4 below; first, though, the immediately following paragraphs treat the mechanisms at work during actualization.

In Harris & Campbell's model of diachronic syntax (1995), the changes under actualization are either additional reanalyses or instances of extension (p. 80). By *extension* is meant the analogical transference of a pattern to further related cases: "extension operates to change the syntax of a language by generalizing a rule" (p. 97). For instance, in one reanalysis that Harris & Campbell document (§5.2.1), the change was extended from a narrow class of Estonian subordinate clauses (complements of speech-act verbs without an initial complementizer) to a broader class of subordinate clauses (with or without complementizers), and then to main clauses.

The mechanism of extension has many points in common with what other approaches have called *analogy* or *rule generalization* (cf. Hopper & Traugott 2003 [1993]:39, 63ff.), and is also basically equivalent to Croft's (2000:148, 154ff.) *intraference*. Croft, working within the cognitive framework of Radical Construction Grammar (Croft 2001), formulates intraference in terms of "the establishment of connections between semantically closely related forms" (2000:154), be these single words, inflections or constructions. Intraference is thus "[the] extension of a form to a function not previously associated with that form", provided it shares "enough linguistic substance, in particular meaning", (p.148) with the form or construction normally used to express that function in the language in question. Among the various kinds of linguistic changes falling under the rubric of intraference is the type of lexically governed change usually known as *lexical diffusion*; this satisfies the definition of intraference in that it presupposes "nearness in semantic space" (p.155).

Coming back now to the process of actualization itself, a central concern of Timberlake's seminal 1977 paper was identifying possible constraints on the directionality of actualization. He noted that Old Finnish had a rule of subject-to-object raising which treated underlying subjects of certain participial clauses as objects of the matrix verb; as objects, they bore the accusative marking appropriate for objects. When, as a result of case syncretism, this raised object was reanalysed as the genitively marked surface subject of the participle, the new case marking replaced the original accusative case gradually, according to a general

hierarchy of ‘animacy’: constituents that were “relatively more subjectlike” (p. 156) received genitive assignment earlier; that is, pronouns were marked for the genitive before agentive or animate nouns; agentive or animate nouns before non-agentive or inanimate nouns. From this Timberlake concluded that the actualization of change is systematic, in the sense that it is governed by linguistic hierarchies which are predictable from the type of change which they constrain:

the change will be actualized earlier for terms in the hierarchy which are unmarked, or more natural, contexts for the change and later for terms which are marked, or less natural, contexts for the change. (p. 157)

Following the publication of Timberlake’s paper, a number of studies have documented the orderly actualization of changes through contexts that can be described in terms of specific semantic and syntactic features, such as degree of individuation (i.e., the extent to which an object is considered as an individual) or degree of ‘remarkableness’ (cf. the case of the English *wh*-relatives, which were first established with highly marked antecedents, and progressed from reference to God through humans of high estate to humans in general); for details see Lichtenberk (1991: 76–77), Matsuda (1998), Croft (2000: 155–156) or Andersen (2001b). Whether such orderly progression can be analysed or not from the perspective of linguistic markedness, as claimed in Matsuda (1998) or some of the papers in Andersen (2001b), is more problematic, since, as noted by Smith (2001: 205–206) and others, the definition of markedness itself is not uncontroversial. For Timberlake, as is obvious from the quotation above, markedness is primarily a notion that “must be understood with reference to the particular change involved” (1977: 169), which is also the way in which I will understand the term ‘markedness’ throughout the remainder of this discussion.

4.4 English verbal gerunds and actualization

As is well known, English gerunds can occur in the following clause functions:

- (34) subject: “*his being too credulous* often gets him into trouble”
- (35) object: “he enjoys *playing practical jokes*”
- (36) predicative: “his job was *selling computers*”
- (37) appositive: “his current research, *investigating attitudes to racial stereotypes*, takes up most of his time”
- (38) prepositional object inside a prepositional phrase functioning as oblique complement: “I insisted *on his wearing a suit*”

- (39) prepositional object inside a prepositional phrase functioning as adverbial: “*on hearing a cry*, she dashed into the garden”

As already noted (§§2.1, 2.2.6), prepositional structures lacking an initial determiner, such as (39), were the first to acquire direct objects and other verbal features. Verbalization was then extended to the nonprepositional Type I (i.e., examples (35)–(37)) and to Type II ((34), (38)). The development of Type III gerunds (e.g., “*there being no handle to the suitcase* makes it difficult to carry”) was different, as will be seen below. Each of these three types will now be separately discussed.

4.4.1 *The transference of verbal features from Type I to Type II gerunds*

By comparison with Type I gerunds ((*by signing of the contract*), Type II gerunds ((*by his/the signing of the contract*) were a marked option in terms of Timberlake’s definition of markedness: the presence of the determiner — a feature characteristic of noun phrase structure — rendered them a less ‘natural’ context for verbalization. It is not surprising, therefore, that by the late sixteenth century they still remained predominantly nominal: in E2 (1570–1640), the second of the three subperiods recognized for Early Modern English in the Helsinki Corpus of English Texts, only 10% (11 examples of 113) of all Type II gerunds governed direct objects. With Type I gerunds, by contrast, the proportion of direct objects at this stage reached 77% (106 examples of 138, cf. Fanego 1998: 105–106).

Type II gerunds themselves can be seen as comprising two subtypes: one where the determiner is a possessive, as in *his signing of the contract* (POSS-*ing* gerunds), and one where it is an article, usually definite, as in *the signing of the contract* (THE-*ing* gerunds). In the former subtype, the possessive, which in the literature is sometimes referred to as ‘subjectoid’ (cf. Pullum 1991), represents the notional subject of the -*ing* form, and hence the whole structure has a much greater affinity with an ordinary clause; witness sequences such as *he signed the contract*. This no doubt explains why the verbalization of this subtype proceeded much faster than that of the gerunds involving a definite article. By the early eighteenth century the post-head dependents in POSS-*ing* gerundives were, almost without exception, verbal: in a sample of 400,000 words covering the years 1700–1757, I recorded 290 gerunds like (38) (*on his wearing a suit*) above and only two nominal ones like (40); for details see Fanego (forthcoming):

- (40) COPC 1714 Lockhart *Memoirs of Scotland* 4H54 0002/103-P1: I do most solemnly declare, ...that *my writing of these “memoirs”* did not proceed from any desire of being an author ...

In the same period and sample, the number of Type II gerunds with an initial definite article came to 136 (Fanego forthcoming). 69 of these were nominal structures, and the remaining 67 exhibited mixed nomino-verbal properties, as in (21) (*the multiplying children*) above or (41):

- (41) COPC 1709 Berkeley *New Theory of Vision* 073/030-P23: *The not observing what has been delivered in the two last sections* seems to have occasioned no small part of the difficulty that occurs in the business of erect appearances.

One could have predicted that THE-*ing* constructions would have continued on their way to complete verbalization, just like all other gerundial patterns. However, from the end of the eighteenth century normative pressures, coupled with complex language-internal changes, arrested their development (for discussion see Fanego forthcoming). Some instances were simply reworded as verbal gerunds of Type I (i.e., structures like “he may probably miss *the seeing some curious productions of nature*” gave way to “he may probably miss *seeing some curious productions of nature*”), others were recast entirely and came to be expressed by means of *that*-clauses or *to*-infinitives, and yet others survived into Present-day English as purely nominal structures (i.e., *the signing of the contract*). The details are irrelevant to the present discussion; what is of interest, however, is that the behaviour of THE-*ing* constructions shows that the gradual extension of verbal properties from Type I to Type II gerunds proceeded chiefly according to a hierarchy of relative ‘nominality’: the more noun-phrase-like a sequence was, the slower it was to acquire verbal traits. The type (*by*) *writing it* became available first, next followed (*by*) *his writing it* and last of all (*by*) *the writing it*. As argued by Timberlake (1977), the actualization of the change was thus governed by a linguistic hierarchy which was predictable from the type of change which it constrained.

4.4.2 *The spread of verbal gerunds of Type I to nonprepositional environments*

As first noted in §2.1 above, throughout the history of English *-ing* forms have tended to occur chiefly as the objects of prepositions, but this association with prepositional use is particularly close in the case of the type now under discussion: in a 103,741-word sample for the period 1500–1570 (Fanego 1996b: 116, 121ff.), out of 136 gerunds of Type I only 7 (= 5.1%) lacked an introductory preposition (e.g., *writing (of) it*). By contrast, in the same period and sample the percentage of nonprepositional use for gerunds containing determiners reached 30.5% (43 examples of 141).

Aside from this, a second major difference between the nonprepositional Type I and its prepositional counterpart lies in its status as a *core complement* in clause structure, as opposed to the prepositional gerunds, which encode either *oblique complements*, that is, complements adpositionally marked (e.g., “I insisted *on being given every detail*”), or elements which, like the adverbial in (39) (“*on hearing a cry*, I dashed into the garden”), are part of the clause periphery.²⁴ There are thus quantitative and qualitative differences between both subtypes, and this probably accounts for the slowness of the nonprepositional subtype to become a real option within the grammar of English, as will be discussed in what follows.

In Middle English, a number of three-place negative implicative verbs, all with the basic meaning “prevent, refrain”, were frequently construed with a nominal or verbal gerund, in a structure of the type *V sb. from X-ing*, cf. c1400 Wyclif *lette men fro doing of iuil* “prevent men from doing evil” (Visser 1963–1973:§2108). The group of verbs in question included *fear, fend, hold, keep, let* “prevent”, *preserve, restrain* and quite a few others. Probably on their model, semantically related two-place verbs like *escape, eschew, forbear* or *refrain* (cf. Visser 1963–1973:§1775), which formerly selected a *to*-infinitive (e.g., c1386 Chaucer *C. T. B 3052* “Ye wol forbere now to do vengeance”), came to govern *-ing* forms as objects.²⁵ The first verbal instances of these can be found from the middle of the sixteenth century (see Fanego 1996a: 38):

- (42) 1561 T. Hoby tr. *Castiglione’s Courtyer* I (1577) D iv [OED s.v. *refrain* v. 5b]: They come so to purpose, that hee can not refraine *telling them*.

Subsequently, the use of gerunds in object position spread via lexical diffusion to more and more negative implicative verbs (*avoid, decline, cannot/could not help, neglect, shun*, etc.), and eventually to other classes of verbs, as I have discussed elsewhere (1996a, forthcoming; see also Visser 1963–1973:§1775). Croft points out (2000: 148ff.) that the mechanism of *intraference* enables constructions from the same language to be used in a function normally expressed

24. For the labels *core* and *oblique* complement see Huddleston & Pullum (2002: 216ff.) and Van Valin & LaPolla (1997: 25ff.).

25. As discussed in Fanego (1996a: 57–58), the early association of *-ing* forms with negative-entailment verbs probably had to do with the original function of the English infinitive marker *to* as a preposition expressing purpose and direction towards (cf. Mustanoja 1960: 514). *To*-infinitives were thus more suitable as complements of verbs of positive volition and intention, than as complements of verbs with the basic meaning “refrain from, avoid”.

by a different construction in that language, provided there is some shared semantic space. It was basically in this way that from the late seventeenth century onwards gerundial complements replaced — either completely or in part — *to*-infinitives (and occasionally finite clauses) with a wide variety of verb classes: emotives (*fear, hate, like, love, etc.*), retrospectives (*remember, forget*), suffering and bearing (*cannot/could not abide, bear*), intention (*intend*), intention and verbal communication (*propose*), etc. Gerundial complements also came to be used with aspectuals, through a process parallel to the one just described, which apparently started with Middle English egressive (*blin* “stop, cease”, *cease*) and continuative verbs, and this was later extended to inchoatives (*begin, start, etc.*); witness sequences such as these: c1300 *To kiss mi fete wald sco not blin* “she would not cease kissing my feet”; c1375 *blinne of his barking* “stop barking”; 1601 *she never would blin telling how his grace sav’d ...*; c1380 *thei sesyden to bilde the citee* “they stopped building the city”; c1380 *I cesse not doynge thankyngis* “I do not stop saying thanks”, etc. See Visser (1963–1973: §§1255ff., 1790–1792) for details, and Mair (2002: 119ff.) for the first occurrences (late eighteenth century) of *begin* plus a verbal gerund.²⁶

The use of Type I verbal gerunds in other clause functions was also a very late development. Occasional instances of gerunds used as subjects, predicatives or appositives can be found in my data for the Early Modern period, but they remain extremely rare even as late as the nineteenth century, as can be seen in Table 1. Further, the figures in that table reveal that the greatest restrictions on the use of *V-ing* constructions applied to the subject function. Despite the fact that, overall, sentential subjects in English are statistically much more frequent than predicatives (cf. Elsness 1981), in my Late Modern English material, Type I verbal gerunds in predicative function consistently outnumber subjects (cf. (43) for one of the few instances of the latter). This finding merits comparison with the behaviour in the same corpus of mixed POSS-*ing* gerundives, as in (44) below:

26. Fischer has argued in various places (1992:322, 1997) that *V-ing* complements in postverbal position served as a replacement of the Middle English bare infinitive (e.g., ME *he thenkith parte it with no man* “he does not think/intend [to] divide it with anyone”), whose function, according to her, was to express semantic directness: “since the *-ing* form could nicely express the actuality of an event, it is not surprising that to a certain extent the *-ing* form could take over the old function of the bare infinitive” (1997:127). Apart from other difficulties, the chronology of the changes described above, with object gerunds becoming available only from very late in the Early Modern English period, does not support Fischer’s hypothesis, as already pointed out by Mair (2002:119–121) with respect to gerundial complements after *begin*.

30 examples of these were preverbal subjects, 10 were extraposed or dislocated subjects, and only 5 were predicatives (Fanego forthcoming).²⁷

- (43) COPC 1778 Walpole *Life of Mr. Thomas Baker* 130/077-P19: a profane idolatry of kings, ... as if *being born of a certain race* could entitle any family to a right of violating with impunity all laws, both divine and human.
- (44) COPC 1791 Boswell *Life of Johnson* 008/046-P04: *His being appointed one of his executors*, gave him an opportunity of taking possession of such fragments of a diary and other papers as were left;

To sum up, this section has shown that the extension of Type I gerunds outside the specific syntactic environment — object of a preposition — where they first occurred in Middle English was a drawn-out and complex process. It took several centuries for structures such as *writing a letter* to become regularly available as core complements in clause structure. Arguably, subjects are a special type of core complement, since in languages for which a VP constituent can be postulated, as is the case with English, the subject is external to VP (cf. Van Valin & LaPolla 1997: 217–218, Huddleston & Pullum 2002: 53, 216). The fact that for a long time the subject slot should have been the one least hospitable to *V-ing* constructions thus suggests that their spread across the grammar of English proceeded largely according to a grammatical relations hierarchy, from peripheral adverbials and oblique complements to core complements internal to VP, and, eventually, to external core complements. Each of these clause constituents could be described as being progressively more marked with respect to the specific syntactic context — the clause slot following prepositions — where the innovation originated, as predicted by Timberlake's (1977) views on the factors constraining the directionality of actualization.

4.4.3 *The development of Type III gerunds*

As noted in 4.3 above, Harris & Campbell (1995: 52, 80) argue that “each example of change under actualization [is] itself either an extension or an additional reanalysis”. Extension, or intraference, has been exemplified in the two previous sections. In this it will be suggested that Type III gerunds, i.e., those having a subject argument in nongentive case, as in “*there being no handle*

27. Note that these figures are based on a 800,000-word sample, while those in Table 1 correspond to a smaller subsample comprising only 440,000 words.

Table 1. Syntactic distribution in Late Modern English of verbal gerunds of Type I [based on four text samples ranging from 100,000 to 120,000 words. In brackets: normalized frequencies per 10,000 words].

	Subperiod 1 (1700–1726)	Subperiod 2 (1732–1757)	Subperiod 3 (1761–1797)	Subperiod 4 (1849–1872)
Preverbal Subject	1 (0.08)	2 (0.2)	3 (0.25)	0
Extraposd or dislocated Subject in Object position	1 (0.08)	1 (0.1)	1 (0.08)	4 (0.4)
Subjective Predicative	18 (1.5)	19 (1.9)	28 (2.33)	32 (3.2)
Appositive	5 (0.4)	7 (0.7)	4 (0.33)	5 (0.5)
Absolute	2 (0.17)	0	0	1 (0.1)
governed by a preposition	0	0	0	4 (0.4)
TOTAL	519 (43.2)	507 (50.7)	529 (44.08)	254 (25.4)
	546 (45.5)	536 (53.6)	565 (47.1)	300 (30.0)

Note: The relative frequencies of nonprepositional use increase across time, from 4.9% in subperiod 1 to 5.4%, 6.4%, and 15.3% in subperiods 2, 3 and 4 respectively.

to the suitcase makes it difficult to carry”, probably²⁸ arose through further reanalyses taking place during the process of implementation of the gerund’s shift from a nominal into a verbal category.

In my data, and in the data adduced in all other relevant sources (see §2.1 above), Type III gerunds never exhibit any nominal features; they can thus be described, quite uncontroversially, as clauses. In other words, a subject argument in nongenitive case is never found in combination with *of*-phrases or attributive adjectives, whereas, as noted in 4.2 above, verbal and nominal properties frequently cooccurred in the case of the gerunds of Types I and II (cf. respectively (31) and (32): “against having *of eighths unnecessarily* in composition”/“my *easy finding them*”). This suggests, in my view, that the emergence of Type III gerunds did not take place by a process of accretion of verbal characteristics, but rather as a result of the abrupt reanalysis as clauses of a number of

28. Until the eighteenth century, Type III gerunds are very hard to come by. In Tajima’s (1985, 1996: 572–575) extensive collection of ME writings there were only 13 examples, several of them doubtful, while in a 392,110-word sample from the Early Modern English section of the Helsinki Corpus I recorded only 11 instances (Fanego 1998). Given the paucity of the evidence, hypotheses about the sources of this gerund type must remain tentative.

related structures which had “the potential for multiple structural analyses” (Harris & Campbell 1995:72, cf. §3.1 above).

One likely source of Type III gerunds may have been gerundial constructions with uninflected genitive nouns, which, as already pointed out by Jespersen, must have “contributed very strongly to strengthen the feeling that a common case might be used as the subject of the gerund” (MEG V:§§9.4ff.). The genitive nouns in question included the ME uninflected genitives (e.g., “by the *mone* shining”) referred to in §2.2.3 of this paper,²⁹ nouns ending in /s, z/ (e.g., *Moses*, *mistress*, cf. Altenberg 1982:46–48) and, more generally, plural nouns. Since the use of the apostrophe as a case marker after the plural *-(e)s* morpheme (i.e., *bishops'*, *girls'*) did not develop in written English until the late eighteenth century (Altenberg 1982:53), in gerundial structures such as (45) it was formerly impossible to ascertain whether the subject of the *-ing* form was intended as a possessive phrase in the ‘genitive’ plural or as a noun phrase in the plain case:

- (45) HC 1689–1690 Evelyn *Diary* 900: ...people began to talke of *the Bishops being cast out of the House*:³⁰

Another source of ambiguity lay in the pronoun *her*, with which, as Jespersen also noted, there is no formal distinction between the possessive and the accusative form, so that a sequence such as “for *her* following me” could be interpreted either way. The combined influence of these two factors can explain, as I see it, the eventual emergence of instances involving unambiguous plain case NPs or accusative pronouns, such as “to prevent *the treaty* taking effect” (COPC 1762 *Universal Museum* 0022/102-P0) or “there would be no harm in *them* walking together” (1823 Hazlitt *Liber Amoris* 121, cf. Visser 1963–1973:§1102). As already noted in §2.1 above, examples of this kind, in particular those involving an accusative pronoun, remained very rare until the Late Modern English period.

In addition to the sources mentioned above, I have argued elsewhere (Fanego 1998:100–104) that the replacement of possessive by nonpossessive forms was also due to the influence of the now obsolete type of absolute participle seen in (46)–(47) (see on this Jespersen MEG:§6.2.2, Visser 1963–1973:§1085):

29. In Early Modern English, some of these could still occur with a zero genitive; see Altenberg (1982:50).

30. The overall situational context shows that *Bishops* is plural, not singular.

- (46) HC 1554 Throckmorton *Trial I*, 69.C1: ... and so *Vaughan's Testimonie being credited*, Ø may be the material Cause of my Condemnation, as the Jury may be induced by his Depositions to speak their Verdict,
- (47) HC 1630 Taylor *Pennyles Pilgrimage* 133.C1: At last they found that which they expected, which was Sea-cole, *they following the veine of the Mine*, Ø did dig forward still:

Here the participle precedes its superordinate clause and controls its subject, which, as noted by Kortmann (1991:101), is deleted under identity with the subject of the absolute (respectively, *Vaughan's Testimonie*, *they*). My data for the Early and Late Modern periods, as discussed in detail in Fanego (1998, forthcoming), suggests that some of these participial structures were reanalysed as verbal gerunds in subject position, a process which helps to explain the distribution of Type III gerunds during the initial stages of their development: out of the 32 instances of this type occurring in a 592,110-word sample covering the years 1500–1726, 14 functioned as preverbal subjects (cf. (23) above and (48)–(50) below for some of them), despite the fact that gerunds, as repeatedly noted in this paper, tend to be used chiefly as prepositional objects.³¹ The evidence from John Dryden's prose usage points in the same direction: Söderlind (1958: §§514, 516) recorded only 12 instances of plain case NPs in Dryden, seven of which were used as arguments of gerunds functioning as sentential subjects.

- (48) HC 1698 Fiennes *Journeys* 151: a mile off by a little village I descended a hill which made the prospect of the town still in view and much to advantage; its but two parishes; the Market Cross has a dyal and lanthorn on the top, and *there being another house pretty close to it high built with such a tower and lanthorn also, with the two churches towers and some other buildings pretty good* made it appear nobly at a distance;
- (49) ECF 1719 Barker *Bosvil and Galesia 2: My Father (said Galesia) and all his Family being of the Loyal Party, in the Time of King Charles the First*, is a sufficient Demonstration of the Non-existence of Riches amongst them;

31. This sample comprised 392,110 words from the Helsinki Corpus (1500–1710), plus 200,000 words from several eighteenth-century corpora (see fn.17 above for details). In the 200,000-word subsample the number of Type III gerunds used as subjects was nine (out of a total of 21), while the number of POSS-*ing* gerundives functioning as preverbal subjects was 15, out of a total of 134 instances.

- (50) ECF 1725 Haywood *The Fatal Secret* 226: *It not being the Time of the Day in which Company usually walk, made the Place they were in extremely retir'd, and they had the good Fortune of meeting no Interruption.*

According to Söderlind (1958: 172), in Dryden's usage "a personal pronoun is never found as subject in a group of this type". In my data for Early and Late Modern English the constituents filling the subject slot are either NPs, just as in Dryden's prose, or expletives such as *it* (2 examples) or *there* (1 example), both of which occurred very frequently in absolute participial constructions (e.g., "*it* being Sunday, we had service on deck"/"*there* being no survivors, the cause of the accident will never be known", cf. Visser 1963–1973: §§1087–1088). In addition, from earlier research on the gerund it is also possible to glean three or four examples where the gerund's subject surfaces as a personal pronoun in the nominative case, as in (51) (cf. Riikonen 1935: 215 on Jane Austen's usage, and Kruisinga 1930: 61–62 on early twentieth-century English):

- (51) 1711–1712 *Spectator* 394 [quoted from Jespersen *MEG* V: §§9.8.3]: *I having a great esteem for your honour and a better opinion of you than any of the quality, makes me acquaint you of an affair that I hope will oblige you to know.*

All of these data, I believe, are consistent with my hypothesis of a participial origin for at least some subtypes of Type III gerunds; they can help to explain, too, the belated appearance in preverbal position of the 'ACC-ing' type, of which the first example known to date is "*him hanging around like this, just messing things up, don't fit in anywheres that I can see*" (1932 D. Hammett *The Thin Man* 252, cf. Jespersen *MEG* V: §§9.8.4 and Visser 1963–1973: 1102). Even today, accusative pronouns in this position remain uncommon in written English, as noted by Declerck (1991: 499–500) or Huddleston & Pullum (2002: 1193), among others.

5. The development of English verbal gerunds: A case of grammaticalization?

It was pointed out in §4.1 that the reanalysis-plus-actualization model of syntactic change first proposed by Timberlake (1977) and subsequently adopted in work by Harris & Campbell (1995), Hopper & Traugott (2003 [1993]: 3, 39, 64–65, 68), or Harris (2003) has been questioned by some scholars. In an

important 1998 article, Haspelmath argued “that the large majority of syntactic changes are instances of ‘pure’ grammaticalization and should be explained within the framework of a theory of grammaticalization, without reference to reanalysis” (p. 315). Behind Haspelmath’s strong position is his claim that most observed morphosyntactic changes are unidirectional, that is, they “turn lexical items into grammatical items and loose structures into tight structures” (p. 344). He therefore objects to the reanalysis-plus-actualization model, and in particular to its formulation by Harris & Campbell (1995), because — among other things — it “has no explanation for the directionality of change” (p. 341).

Haspelmath’s extreme views on grammaticalization as the main mechanism of change, and on unidirectionality as “the most important constraint on morphosyntactic change” (2002), are by no means shared by everyone working on diachronic syntax; see, for instance, Hopper & Traugott (2003 [1993]: 59, 69), the collection of papers in Campbell (2001b), or Heine (2003: 599). Yet statements acknowledging that “grammaticalization ... is probably the source of the majority of grammatical changes that languages undergo” (Croft 2000: 156) are not unheard of either, and in some of her more recent work Traugott (2003: 645) has suggested that the boundaries of what is often considered grammaticalization could be expanded by “paying more attention to the morphosyntactic (and pragmatic) contexts in which lexical items become grammaticalized”, so that “little [would] be excluded from study”.

In view of the above, it seems worthwhile to consider whether a grammaticalization analysis might also be appropriate for the development of the English gerund which has been the concern of this paper. Such an analysis has in fact been proposed by Tabor & Traugott (1998) in a recent paper where, in order to identify changes falling under the scope of grammaticalization, they suggest using the following correlated hallmarks (p. 235):

1. morphosyntactic change
2. pragmatic/semantic change
3. gradualness of the change

The conclusion is reached that the verbalization of the gerund shows all “three hallmarks of grammaticalization” (p. 243), namely: (a) it is a new syntactic form which did not exist in Old English; (b) the semantic function of the ending has changed as well, for the original OE *-ung/-ing* ending, though extremely productive, showed some lexical idiosyncrasies while its modern descendant

can be applied to essentially any main verb;³² and (c) the verbal gerund emerged “incrementally” (cf. the discussion in §4.2 above).³³

It seems to me, however, that stretching the concept of grammaticalization in this way seriously waters down our notion of this field of study, as it is generally understood. Grammaticalization, as Haspelmath (1998: 318) puts it,³⁴

is the gradual drift ... toward tighter structures, toward less freedom in the use of linguistic expressions at all levels. Specifically, lexical items develop into grammatical items in particular constructions, which often means that independent words turn into clitic and affixes. In addition, constructions become subject to stronger constraints and come to show greater cohesion.

Traugott’s own current definition (2003: 643–644) of grammaticalization, in turn, sees grammaticalization as “a complex set of correlated changes”, namely

- a. structural decategorialization (i.e. loss in morphosyntactic properties characteristic of the source forms);
- b. shift from membership in a relatively open set to membership in a relatively closed one;
- c. semantic and pragmatic shift from more to less referential meaning via invited inferencing.

If we now examine the development of the English gerund in the light of these two definitions, it is clear that the gradualness of the change is consistent with a grammaticalization analysis. The same might be said of the fact that ME *-ing/-ung*

32. To make it consonant with actual OE usage, as described by Kastovsky (1985: §3.2.10), I have modified Tabor & Traugott’s statement (p. 243) that the original OE *-ung/-ing* ending “was used mainly in forming abstract nouns from the second class of weak verbs”.

33. Under discussion in Tabor & Traugott’s paper is Lehmann’s (1995 [1982]: 123, 143ff.) claim that in grammaticalization processes items relating to constituents of arbitrary complexity undergo condensation in structural scope and develop into items modifying a single word or stem. Tabor & Traugott try to show that many change episodes that could legitimately be considered as instances of grammaticalization involve increase in structural scope (defined as C-command Scope Increase), rather than decrease, cf. in this connection the analysis they propose for nominal and verbal gerunds, as discussed in §4.2 above. In my view, this hypothesis, though interesting, needs further investigation if it is to be accepted as criterial for grammaticalization, since, as Tabor & Traugott acknowledge, there are counter-examples (cf. their pp. 253, 260).

34. Compare also Haspelmath’s (2002) current definition of grammaticalization: “A grammaticalization is a diachronic change by which the parts of a schematic construction come to have stronger internal dependencies.”

shifted from a derivational affix into an inflectional one, since it has sometimes been argued that there are reasons to regard derivational affixes as less grammatical (cf. Heine et al. 1991:213, Norde 2002:54–55; though see Harris & Campbell 1995:337–338 for a different view). However, even if we subscribe to this somewhat controversial view regarding the relative position of derivational and inflectional affixes along the cline of grammaticality, it is clear that the class of abstract action nouns to which the nominal gerund belonged cannot properly be described as being a more open, less grammatical class than the class of verbal gerunds. Similarly, whether we regard modern gerund constructions as VPs, or, according to some analyses, as full clauses, they are in no way a more grammatical category than the category NP. In this respect, therefore, the changes affecting the gerund do not exhibit the most distinctive property of grammaticalization processes, namely the shift from less to more grammatical.

Verbal gerunds show no signs of decategorialization (Hopper 1991, Heine 2003:579), either. It is true, of course, that they have lost most of “the morpho-syntactic privileges characteristic of the full category Noun” (Hopper 1991:22) and hence cannot cooccur with articles or take attributive adjectives, but instead they have assumed the attributes of the major category Verb and can now govern direct objects, be modified by manner adverbs (e.g., *violently*, *quickly*, etc.), and take subjects in nongenitive form. Even more importantly, verbal gerunds are not “constructions ... subject to stronger constraints” (cf. Haspelmath 1998) than nominal gerunds, but rather the opposite: as has been demonstrated in this paper, verbal gerunds have greater syntactic variability than nominal ones, since some types of nominal gerunds (i.e. those of Type I) had a very restricted distribution in earlier English and occurred chiefly in prepositional environments. Verbal gerunds, by contrast, have now become available in all clause functions and, furthermore, have increased enormously in frequency at the expense of both infinitives and *that*-clauses (for details, cf. Fanego 1996a, 1996b: 117, 118–120, forthcoming).

Finally, from the point of view of semantics/pragmatics it is usually agreed that grammaticalization processes involve some kind of meaning exchange or meaning transfer (Heine 2003:591–592, Hopper & Traugott 2003 [1993]:94ff., Traugott 2003), though not necessarily bleaching or complete loss of meaning. Thus, in the case of the development of future *go* in English (e.g., “it’s going to rain”) the original sense of physical motion (“I’m going [in order] to marry Bill”) was lost, but a new meaning of future prediction or intention was gained instead. Once more, none of this applies to the English gerund: OE and ME *-ing* forms had an exclusively actional sense, as is still true of PDE nominal constructions like

“*his exploring of the mountain is taking a long time*”. Modern verbal gerunds can be actional too; witness in this respect sequences such as “*on hearing a cry, she dashed into the garden*” or “*we’d like to avoid people opening this door during the party*”, and cf. Declerck (1991:495ff.). However, since at least the sixteenth century English verbal gerunds have also been used to encode factive propositions (cf. Wik 1973:132, Fanego forthcoming), as in examples (41) (“*the not observing what has been delivered ... seems to have occasioned ...*”) and (43) (“*as if being born of a certain race ...*”), among others. The modern gerund, therefore, is richer in semantic content than its predecessor and does not show signs of “the gradual drift ... toward less freedom in the use of linguistic expressions at all levels” (Haspelmath 1998:318) which seems to be a concomitant of grammaticalization processes.

To conclude, it seems to me that the development of the verbal gerund construction, though exhibiting the gradualness which is typical of grammaticalization, is best understood as a separate kind of process. In this respect, it appears to pose a challenge to current views of grammaticalization as the main mechanism of syntactic change, and to views of syntactic change itself as moving primarily, if not almost exclusively, in the direction of lexical to grammatical and of looser to tighter.

6. Concluding remarks

During the first half of the twentieth century, and more recently during the 1980s, the origin of the English verbal gerund was a topic of lively debate among philologists in Europe and North America. In this paper I hope to have demonstrated that the trigger for the verbalization of ME *-ing* nouns was the syntactic ambiguity of a set of gerundial phrases, such as *for longenge to heuene* or *auerste guoinge in*, which lacked overt determiners and involved constituents that could occur readily in both NP or VP structure. Assuming with Harris & Campbell (1995:61ff.) that the only prerequisite for syntactic reanalysis to occur is that “a subset of the tokens of a particular constructional type ... be open to the possibility of multiple structural analyses”, I concluded that this type of gerundial construction was the locus for the reinterpretation of the ME action noun as a form that was sufficiently verb-like as to govern direct objects and develop other verbal features.

On the basis of the occurrence since Middle English times of hybrid gerunds exhibiting complex combinations of nominal and verbal properties

(e.g., *teaching of childer their letters* “teaching children their letters”, cf. §4.2), I argued that the reanalysis of the *-ing* nominal cannot have been an abrupt one from N to V. I therefore proposed to account for the split behaviour of gerunds during much of their recent history by allowing for gradience of membership in word-classes (cf. Heine et al. 1991:221, 231–233, Anderson 1993, Haspelmath 1998, 1999).

Sections 4.3–4 were concerned with the gradual actualization of the change over a period of several centuries. It was shown that the spread of verbal gerunds across the grammar of English consisted of multiple changes taking place through intraference and lexical diffusion (cf. 4.4.1–2) and through further reanalyses (cf. 4.4.3). Some subtypes of the new construction became possible before others, their generalization being largely governed by two different linguistic hierarchies, namely a hierarchy of relative ‘nominality’ (the more nominal-like a gerundial sequence was, the slower was it to acquire verbal traits; see 4.4.1) and a grammatical relations hierarchy (some types of verbal gerund became available first as prepositional adverbials and oblique complements, then as core complements internal to VP, and last of all as subjects; see 4.4.2). Both hierarchies are consistent with Timberlake’s insightful claim (1977) that the actualization of a change is governed by hierarchies which are predictable from the type of change which they constrain.

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Résumé

On analyse dans cet article le processus selon lequel le gérondif anglais, à l'origine un nom déverbal abstrait, a finalement acquis des traits verbaux, tels que la possibilité qu'un objet direct le suive (par exemple, *by writing a letter*). L'examen des données linguistiques dans l'anglais médiéval nous montre que quelques constructions de gérondif, pouvant se comprendre de deux façons, ont provoqué la transformation d'une catégorie nominale en une de nature verbale. En offrant une description de l'évolution historique du gérondif, cet article tient compte aussi de ses implications sur le plan de la théorie de la grammaticalisation.

Zusammenfassung

Gegenstand der Untersuchung dieses Artikels ist die Entwicklung des englischen Gerundiums, welches ursprünglich ein abstraktes deverbales Substantiv war. Im Laufe der Zeit nahm es aber verbale Eigenschaften an, wie etwa die Fähigkeit, ein direktes Objekt zu regieren (z.B. *by writing a letter*). Die Analyse der sprachlichen Daten zeigt, dass im Frühmittelenglischen einige Konstruktionen mit dem Gerundium ambig wurden und zur Reinterpretation einer nominalen Kategorie als verbaler führten. Der Artikel geht auch auf die Implikationen ein, die sich aus den am Gerundium zu beobachtenden Entwicklungen für aktuelle Theorien des Sprachwandels wie die Grammatikalisierungstheorie ergeben.

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